

Public Works *Digest*

In this issue:

Annual Report Summaries





U.S. Army Installation
Management Command
2511 Jefferson Davis Highway
Arlington, Virginia 22202-3926

Public Works Digest is an unofficial publication of the U.S. Army Installation Management Command, under AR 360-1, The Army Public Affairs Program. Method of reproduction: photo-offset; press run: 1,500; estimated readership: 40,000. Editorial views and opinions expressed are not necessarily those of the Department of the Army.

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Layout:
Corporate Visions, Inc.
Washington, DC

On the cover:
Maj. Tyler Faulk (left of center with two-tone shirt), resident engineer, Turkey Resident Office, supervises the ongoing construction at the Kazbegi border crossing station on the Georgia-Russia border. The border-crossing project is one of many the U.S. Army Corps of Engineers, Europe District handed over to the Georgian government in 2007. Photo by Mark Nedzbalao

 Printed on recycled paper.

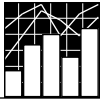
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Public works action packed in 2007

by Lt. Gen. Robert Wilson

To say the least, 2007 was eventful and exciting. It was a year that began and ended with new Army missions that had to be planned, programmed and budgeted in a matter of months. It was also a year filled with new programs and initiatives across the full range of public works activities.

The year began with the president announcing the growth of the Army by 65,000 Soldiers and fencing several billion dollars to pay for it — beginning with Military Construction projects in the fiscal year 2007 Supplemental Budget request. Installation Management Command master planners were put to the test by having to develop a \$270 million program in one month for the FY 2007 Supplemental, a \$2.25 billion program in two months for the FY 2008 MILCON, and a \$4 billion program in three months for the FY 2009 MILCON submission.

The work required the right projects to be planned at the right locations for the right units at the right scopes and at the right costs. A process that formerly took several years was condensed to months, and Congress was provided high quality and defendable projects to enable Army growth.

The year ended on the same note with the exposé at Walter Reed Army Medical Center of the wounded warrior problems. The Army developed a new program to take care of wounded warriors. Part of this program involved the stand up of new units (Warrior Transition Units), the development of specialized facility standards for those units, the conversion of those standards into MILCON projects and the preparation of those projects — \$1.2 billion worth — for inclusion in the FYs 2008/09/10 Global War on Terror budget requests. Again, a decade-long process reduced to months, and quality projects provided to Congress to fund.

While all this master planning was going on, the U.S. Army Corps of Engineers awarded 55 projects with a total value of \$1.39 billion and turned over 92 projects to



Lt. Gen. Robert Wilson
Photo by Monica King

garrisons for beneficial occupancy.

MILCON was not, however, the only area of public works that saw dramatic progress. All functional areas stayed in step with a transitioning Army at war — Sustainment, Restoration and Modernization; Utilities/Energy; Soldier housing; business initiatives and professional development. Here are a few highlights:

SRM

- Garrisons were funded at 75 percent of their SRM requirement, the highest they ever have been, and the improvement in the quality of our existing facilities is evident as one travels to installations and sees the great work these funds are used for.
- Additionally, IMCOM centrally funded \$140 million worth of projects in barracks, mostly for Trainee Barracks Upgrades, and began a multi-year, \$6 billion program to fix quality and quantity problems in the Training Barracks.
- We also awarded: \$113 million in projects to improve buildings left vacant by deployed Soldiers (Flagship projects); \$13 million for the demolition of over 400 buildings for 1.6 million square feet of obsolete and unusable inventory; and, lastly and most importantly, \$152 million in projects to fix barracks, Soldier and Family Assistance Centers, and Warrior Transition Unit Operations facilities for our wounded warriors.

Energy/Utilities

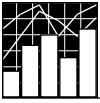
- The Office of the Assistant Chief of Staff for Installation Management and IMCOM developed and launched the Army Energy Plan.
- An Energy Summit, the first of more to come, was held that brought all the key stakeholders together to resolve issues and forge a way ahead to improve our energy management and reduce our consumption. The summit focused on use of Energy Savings Performance Contracts, Utilities Privatization and Utility Commodity Purchasing and was such a success that a follow-on summit has already been scheduled for December.
- FY 2007 also saw 23 new utility privatization contract awards, the most notable being all the utility systems at Forts Richardson, Wainwright and Greely, Alaska. This was the single largest utility privatization award with a value of over \$4 billion alone. All the new privatization contracts awarded in FY 2007 will recapitalize aged inventory at a cost avoidance to the Army of almost \$1 billion.

Housing

- The Residential Communities Initiative continues to progress with a total of 78,000 homes privatized, over 10,000 new family homes built, over 9,500 renovations and the initiation of a similar program to construct new homes for senior enlisted soldiers.
- A Barracks Summit was held in July that focused the collaborative effort of 175 attendees from garrisons, regions, Army Commands, USACE, OACSIM and IMCOM to address and solve

Acronyms and Abbreviations:

DPW	Directorate of Public Works
FY	Fiscal Year
IMCOM	Installation Management Command
MILCON	Military Construction
OACSIM	Office of the Assistant Chief of Staff for Installation Management
SRM	Sustainment, Restoration and Modernization
USACE	U.S. Army Corps of Engineers



Corps' Military Program on the road from good to great

by Lt. Gen. Robert L. Van Antwerp

Army Chief of Staff Gen. George W. Casey Jr. said in a keynote address at the Association of the United States Army Annual Meeting in October, "Our warriors are our ultimate asymmetric advantage, the one thing that no enemy can duplicate... We're committed to ensuring that the quality of life of our Soldiers, Families and civilians is commensurate with their magnificent service."

The U.S. Army Corps of Engineers is in position to help the Army make that commitment a reality. The Corps was a major contributor to that effort in fiscal year 2007 by providing quality facilities for the Army and for other Department of Defense agencies.



Lt. Gen. Robert L. Van Antwerp
Photo by F.T. Eyre

During the past year, the Corps' Military Programs met many challenges, turned them into opportunities and emerged stronger. Our customers were faced with

limited resources, so we were challenged to deliver first-class facilities to meet their needs with fewer dollars. Army Transformation, Global Defense Posture Realignment, the Global War on Terror, Base Realignment and Closure, the Grow the Force initiative and supplemental programs created a gamut of issues due to their late releases during the year. Those issues placed a heavy burden on the Corps, our customers and our design and construction partners in private industry.

But despite the demands of a challenging operational tempo, the Corps team worked hard alongside our customers and our contractors. Together, we ended the year with success. We awarded 90 percent of ▶

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wounded warrior, permanent party, trainee barracks and relocatable barracks issues. Outcomes were the new "Strickland Suite" barracks for Warriors in Transition and also for Soldier of the future, a \$6 billion Integrated Trainee Barracks modernization plan, the beginning of a Single-Man Room initiative for permanent party unaccompanied Soldiers and relocatable building exit plans valued at \$4.5 billion.

- FY 2007 also saw the initiation of the First Sergeants Barracks Initiative that will improve the quality of life of our single Soldiers by providing them quality living areas, giving them responsibility for their rooms and holding them accountable for them.

Professional development

- IMCOM-sponsored courses trained 60 public works executives and over 235 master planners.
- OACSIM/IMCOM conducted on-site work classification training at 15 garrisons and trained over 220 students, sponsored five key training events for energy managers, sponsored the training of 175

Directorate of Public Works professionals as Certified Energy Managers and trained over 250 personnel at the Installation Management Institute.

- IMCOM completed the public works section of the CP-18 (Scientists and Engineers) Master Intern Training Plan, hired 13 new engineer interns and permanently placed 15 intern graduates into permanent engineer positions. This is equal to the success of all other career programs combined.
- IMCOM also published a Master Planning Technical Manual that is a top-class, cradle-to-grave manual that explains and instructs all aspects and products of master planning.

USACE installation support

- OACSIM/IMCOM directly funded the efforts of the Huntsville Center of Expertise and 35 engineer "project manager forwards" at our garrisons to directly assist DPWs to develop all the products listed above. These efforts were crucial and essential for our success in developing the Grow the Army and Wounded Warrior projects plus many, many other initiatives, such as area development guides (31), charrettes

(50+), requirement analyses (15), corrosion prevention/control (\$12 million), rate intervention (\$2.2 million savings), energy audits (\$4.6 million savings), bridge/dam/airfield/railroad inspections and many others.

- Finally, this *Public Works Digest* continues to be an excellent audit history of public works accomplishments, and your articles demonstrate your commitment to excellence.

I realize that this is a very abbreviated version of the public works accomplishments for FY 2007 and that each of our 100-plus garrisons could pen a similar article just for their accomplishments. I do not want anybody to believe that this is all we accomplished.

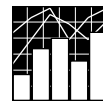
All in all, it's been a very good year. Thank you all for your excellent, tireless and top-quality work.

Support and Defend.

Army Strong!

Lt. Gen. Robert Wilson is the assistant chief of staff for installation management and commanding general, Installation Management Command.





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our planned programs for Army and other DoD customers for a total of 324 Military Construction projects with a program amount of \$7.85 billion.

Military Construction awarded in FY 2007		
Type	Projects	Amount
Army MILCON	138	\$2.8 billion
Army BRAC	50	\$2.7 billion
Army awarded total	188	\$5.5 billion
Air Force	66	\$1.2 billion
Air Force BRAC	37	\$262 million
DoD BRAC	3	\$120 million
Other DoD customers	30	\$754 million
Other awarded total	136	\$2.35 billion
Awarded grand total	324	\$7.85 billion

The MILCON Transformation acquisition approach had a positive effect on Army MILCON projects. With the initial phase of MILCON Transformation, we developed and used a standard Request for Proposal across the Corps. The standard RFP enabled us to move away from overly prescriptive requirements to performance-based criteria, which allowed for more innovation by contractors and reduced delivery time and costs. We delivered about 90 percent of the awarded projects at, or very close to, full scope and within the program amount.

The Corps also executed more than \$2.2 billion in operations and maintenance requirements in direct support of Army installations and other customers, \$1.1 billion in environmental requirements, including \$144 million for Army environmental quality work in support of the garrisons, and provided \$400 million in real estate support through Military Programs.

Support to the GWOT effort continues

to be our top priority. To date, that support has encompassed about 6,000 projects in Iraq and Afghanistan worth more than \$13.8 billion.

The current fiscal year is providing an even larger military mission. FY 2008 is projected to be our peak year for Army MILCON and Base Realignment and Closure. The budget request contains 182 Army MILCON projects programmed at \$5.2 billion, with an additional 70 projects programmed at \$1.3 billion as potential adds. The Army BRAC MILCON request includes 75 projects for about \$2.7 billion.

Together, that's a potential FY 2008 Army total of about \$9 billion — about 60 percent higher than the FY 2007 level of \$5.5 billion. The overall military program for FY 2008 is expected to be about \$13.6 billion — roughly 70 percent higher than the FY 2007 level of \$7.85 billion.

Our long-range forecasting indicates we will continue to face challenges for many years to come.

I expect my dedicated team to continue to step up to the plate. We will maintain the progress made with MILCON Transformation, partner with industry, adopt improvements from lessons-learned in FY 2007 and build on our use of standard designs from the Corps' Centers of Standardization.

Acquisition strategies for major construction in the military mission area now employ MILCON Transformation concepts. As this process has unfolded, there has been much interest in involving the construction contractor early in the design process. These early-involvement strategies have been used in the Tri-Service Design-Build Early Start Demonstration Pilot Program and the USACE pilot program for Early Contractor Involvement acquisition, which includes the Integrated Design, Bid, Build strategy being employed, for example,

Work placement in Iraq, Afghanistan			
Location	Total to date	FY 2007	FY 2008
Iraq	\$10.1 billion	\$1.9 billion	\$1.7 billion
Afghanistan	\$3.8 billion	\$410 million	\$800 million


by North Atlantic Division for the new Fort Belvoir Hospital.

To continue to provide quality, adaptable and sustainable facilities in less time and at lower cost with this larger program in FY 2008, MILCON Transformation principles must play an even bigger role. In FY 2008, we will start to move from design-build acquisition to site-adapt facilities to deliver quality facilities even faster and more cost effectively. Site adaptation is scheduled to begin fully for Army standard facilities in FY 2009.

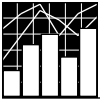
Our ability to meet the coming challenges and fulfill this vital role for the nation depends on each member of the team. We must be aggressive and innovative to meet all the requirements in support of our service personnel and their Families. Thank you for the work you do every day to make this happen.

Essayons.

Army Strong – Engineer Ready!

Lt. Gen. Robert L. Van Antwerp is the chief of engineers and the commanding general of the U.S. Army Corps of Engineers. 

Acronyms and Abbreviations	
BRAC	Base Realignment and Closure
DoD	Department of Defense
FY	Fiscal Year
GWOT	Global War on Terror
MILCON	Military Construction
RFP	Request for Proposal
USACE	U.S. Army Corps of Engineers



'Tis the season: Corps' 2007 installation support year-end report

by Pete Almquist

The U.S. Army Corps of Engineers has just completed a highly productive year in partnership with the Army's three-star Installation Management Command, formerly the Installation Management Agency. This IMCOM-USACE partnership helps ensure that our Soldiers, their Families and civilian employees have the best facilities possible in which to live, work and train.

Achieving this goal has been no small task given the shortage of funds for Base Operations Support, and Sustainment, Restoration and Modernization while the Army continues to transform and fight the Global War on Terror. Installation support has two major components: building the facilities and then maintaining them. The follow-on maintenance of facilities often proves to be the more challenging of the two.

This article highlights several features of USACE's \$9 million Installation Support Program, which is financed by Headquarters, IMCOM.

Liaisons, project manager forwards, checkbook funding

The program provides USACE liaisons to each of the six IMCOM regions. It also places high-value, part- and full-time USACE "project manager forwards" at more than 30 key Army installations, and it makes "checkbook funding" possible for non-reimbursable support.

Critical installation-support checkbook and reimbursable services for Directorates of Public Works include tools such as:

- Engineering Knowledge On-Line, the web portal that disseminates knowledge and supports effective virtual program management;
- the highly respected bi-monthly *Public Works Digest*;
- high payback utility rate intervention support from the Installation Support Center of Expertise;
- planning charrette support for critical Military Construction project



Pete Almquist
Photo by Alexandra Stakbiv

- development;
- master planning updates;
- installation design guide updates;
- facility utilization studies;
- Geographic Information System mapping support;
- relocatable building support for Global Defense Posture Realignment and Army Modular Force initiatives; and
- development and acquisition of responsive DPW support contracts.

USACE divisions, districts, centers, labs

Master planning and related support, a top Army priority, was key to ensuring projects were put in the pipeline to meet the myriad of troop restationing initiatives. North Atlantic Division provided critical and timely engineering and master planning support to IMCOM Northeast and Europe regions and installations.

Forty-five percent of South Pacific Division installation-support dollars provide master planning support for installations, such as the Presidio of Monterey, Calif., Hawthorne Army Depot, Nev., Yuma Proving Ground, Ariz., and Dugway Proving Ground, Utah. Northwestern Division provided master planning support to Fort Leonard Wood, Mo., for installation design guide and real property master planning updates, GIS updates and upgrades to increase master planning capabilities, and design charrettes for the fiscal year 2008 Grow-the-Force projects to expedite Cen-

ters of Standardization involvement.

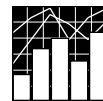
Providing SRM contract support to the DPWs was also important. New construction contracts from Savannah District resulted in the team successfully awarding the entire Fort Bragg, N.C., SRM program of \$40 million.

Providing technical support to the DPW workforce was another high priority item. The Louisville District teamed with our Construction Engineering Research Laboratory in Champaign, Ill., to provide assistance to Fort Knox, Ky., to determine the cause of corrosion in above ground copper pipes in about 12 buildings.

Energy conservation is a major presidential initiative and a high priority for Army leadership. The Engineering and Support Center, Huntsville filed five intervention petitions, and the ruling on three cases resulted in a cost avoidance of \$2.2 million. Huntsville Center also conducted 19 installation electric utility and assessment surveys that identified in excess of \$4.6 million in potential savings or cost avoidances.

This represents a sampling of the FY 2007 USACE Installation Support Program accomplishments. The FY 2008 program will be even more challenging as Army Transformation becomes even larger and the goal remains to ensure the best facilities for our Soldiers and their Families. ➤

Acronyms and Abbreviations	
BOS	Base Operations Support
DoD	Department of Defense
DPW	Directorate of Public Works
EKO	Engineering Knowledge Online
FY	fiscal year
GIS	Geographic Information System
IMA	Installation Management Agency
IMCOM	Installation Management Command
LNO	liaison officer
MILCON	Military Construction
O&M	operations and maintenance
PM	project manager
SRM	Sustainment, Restoration and Modernization
USACE	U.S. Army Corps of Engineers



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Reimbursable installation support work

End-of-year reports for 2007 indicate a total of about \$2.2 billion dollars of work accomplished using operations-and-maintenance reimbursable funds from a variety of DoD organizations during FY 2007, about the same as last year. The total does *not* include reimbursable O&M-funded work accomplished by USACE's Gulf Region Division and Transatlantic Program Center, or O&M-funded work accomplished by the Engineering Research and Development Center.

Huntsville Center and the North Atlantic Division led USACE in the amount of O&M-funded reimbursable work. Huntsville's Installation Support Center of Expertise provided critical assistance for a variety of programs including centralized demolition programs, master planning, utilities rate intervention, furnishings acquisition, requirements determination, energy savings performance contracts and others.

This reimbursable O&M workload represents DoD customers who have choices in selecting service providers. USACE is proud of the partnerships that these workload figures represent.

2007 DPW Installation Support Program of the Year

In his bestseller "Good to Great," Jim Collins says, "Sustained great results depend upon building a culture full of self-disciplined people who take disciplined action." Apparently, IMCOM believes Louisville District fits this mantra, because it selected Louisville for this prestigious award.

Brig. Gen. John A. Macdonald, deputy commanding general of IMCOM, in a congratulatory memorandum to Col. Raymond G. Midkiff, the Louisville District commander, praised the district for its superb support to Fort Campbell, Ky. The memo cited Louisville as a full partner in accomplishing the installation Real Property Maintenance Army, environmental, Military Construction Army, and master planning missions in support of MILCON Transformation.

Also noted was Louisville's effective use of the PM forward champions to support day-to-day operations, long-term master planning, and project design and execution.

"For this district, there is no such thing as 'good enough' and no sacred cows," said Col. Frederick Swope, the Fort Campbell garrison commander. "If a solution doesn't provide the needed support, this district takes it on and gets it fixed ... period."

All Louisville District employees are congratulated for a job very well done and a customer-oriented, can-do attitude that continues to improve the quality of life for all the Soldiers, Families and civilians at Fort Campbell.

Installation Support Professional of the Year

Gregg Bridgestock of Sacramento District is the third recipient of this award and is truly deserving of it. Bridgestock's hard work, partnering, innovation, dedication, responsiveness and engineering knowledge have served the Army well in his long and successful career.

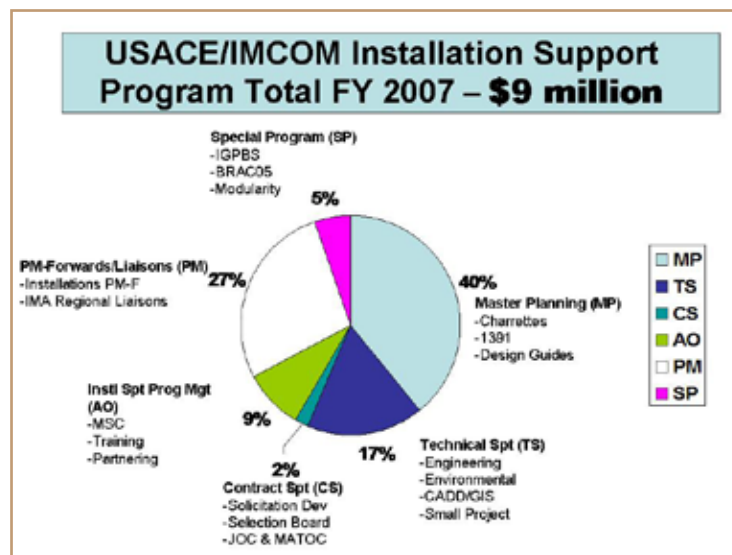
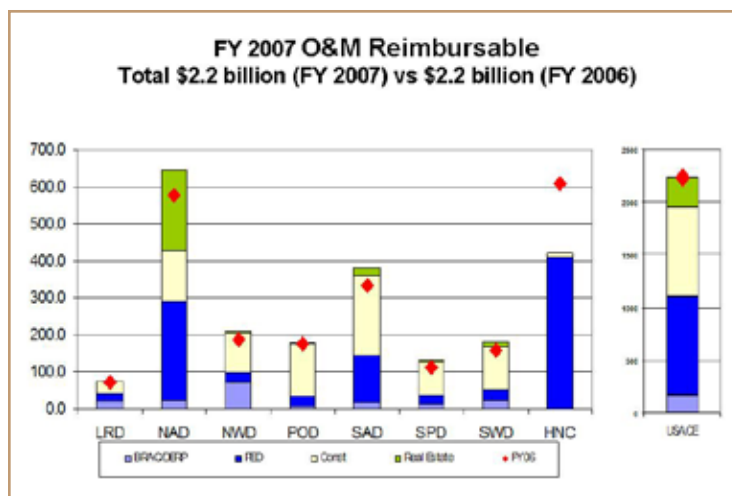
In particular, he has served exceptionally as the installation project manager for the Presidio of Monterey and the primary point of contact for the California National Guard. Bridgestock has managed in-house and multi-district project delivery

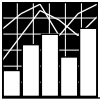
teams in a variety of complex and challenging, as well as geographically diverse, projects within the past year. Bridgestock said it best when he commented, "Customer Care has paid off."

The true winners, though, are the Army service members, their Families and government civilians who have benefited from his efforts. Bridgestock has been a major contributor to providing them with a better place to work, live and play. (Editor's note: For more about this award, see the September-October Public Works Digest, page 43.)

USACE LNO to IMCOM-West

Randy Holman is a great example of the LNO program. He was one of the LNOs selected to represent USACE at the original seven IMA region headquar- ➤





Repair project approvals set new high

by William Allen

Last fiscal year turned out to be a banner year for repair project approvals with 132 projects submitted. These projects represent a total of \$993,749,000 of repair authority. These quantities are more than twice as much as were approved in fiscal year 2006, when 61 projects were approved for a total of \$441,283,000.

The 2007 dollar figure also represents about \$32 million in projects that were re-approved and one that had its approval deferred into FY 2008. The table gives a

breakdown of the approvals by the types of funds used for requested repairs.

One project had its approval deferred until this fiscal year for technical reasons. The deferral could have been avoided had there been one more week to tie up loose ends.

Some additional statistics on projects that most directly support Soldiers:

- 34 barracks projects that totaled \$239,892,000 were approved;

- Seven projects for the new Warrior-In-Transition program totaling \$48,604,000 were approved;
- Three dining facility projects totaling \$10,900,000 were approved;
- 39 projects that totaled \$517,641,000 required Congressional notification.

Most people at the garrison Directorates of Public Works know that maintenance and repair projects that exceed the garrison approval authority must be forwarded to higher headquarters for approval. Since Assistant Chief of Staff for Installation Management Lt. Gen. Robert Wilson has delegated all of this authority to subordinate organizations, the projects forwarded for approval are sent to Deputy Assistant Secretary of the Army for Installations and Housing David Reed for approval. ➤

Type of Funds	Number of Projects	Total Amount Approved
Army Working Capital Funds	1	\$25,000,000
Nonappropriated Funds	1	\$61,000,000
Operations and Maintenance, Army Funds	80	\$492,578,000
Nonappropriated Funds & Operations and Maintenance Funds	2	\$9,600,000
Operations and Maintenance, Army Reserve Funds	5	\$29,503,000
Operations and Maintenance, Defense Funds	42	\$343,309,000
Total	131	\$960,990,000

Acronyms and Abbreviations	
DASA-I&H	Deputy Assistant Secretary of the Army for Installations and Housing
FY	Fiscal Year

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ters. Holman served as the go-between for USACE's Southwestern Division and IMA's Southwest Region. Subsequently, IMCOM replaced IMA, and the Southwest and Northwest regions combined to form IMCOM West, so Holman's job just got bigger and better.

He is the lead LNO for IMCOM West and is supported by three USACE divisions — the South Pacific, Northwestern, and the Great Lakes and Ohio River divisions. Together, those divisions embrace more than 40 Army installations and cover roughly half of the lower 48 states.

Holman provides program management support for all Army facility-management requirements touching IMCOM-West. This includes support for planning, programming and executing major construction, facility repair and modernization, real estate actions and environmental projects.

He was instrumental in setting up the Southwestern Division as the lead to support IMCOM-West. He drafted a comprehensive program management plan to assure one-door-to-the-Corps service for IMCOM-West that includes setting DPW priorities, centrally funded support and reporting of USACE accomplishments in the West region.

Holman helped lead the Joint San Antonio (Texas) Military Program execution. This was a Pentagon-directed move to execute the complex \$2 billion-plus San Antonio program via Army, Air Force and Navy resources rather than simply using Corps resources. The complexity comes from the tri-service involvement and because the program includes medical facilities.

USACE and IMCOM are fortunate to have Holman and five more high-performing LNOs at the other IMCOM regions,


working hard to make the partnership more effective for Soldiers and their Families.

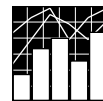
Looking ahead

Forecasts for FY 2008 predict another very challenging year. The Army is currently under a Continuing Resolution Authority, so money remains tight as no new starts for new facilities are authorized.

In FY 2008, USACE will strive to continue to improve support for IMCOM. Full partnerships with all federal and private sector participants are key to future success.

POC is Pete Almquist, 202-761-7495, peter.w.almquist@usace.army.mil.

Pete Almquist is acting chief, Installation Support Branch, Headquarters, U.S. Army Corps of Engineers. 



Huntsville Center projects range from saving energy to designing state-of-the-art facilities

by Charles Ford

Whether your project is about saving energy, buying new furniture, establishing access control points or removing unwanted facilities from the Army inventory, among others, the U.S. Army Engineering and Support Center in Huntsville, Ala., has the expertise to help you.

Huntsville Center serves as the U.S. Army Corps of Engineers' Installation Support Center of Expertise. In that capacity, Huntsville Centers' project managers partner with Corps districts, Directorates of Public Works, Installation Management Command and other federal agencies on installation support projects worldwide.

This past year, Huntsville Center realigned to better serve its customers. The Installation Support Directorate and the Project Management Directorate merged to become the Installation Support and Programs Management Directorate. The ISCX comes under this directorate and, through various programs, provides several types of support.

Army stationing facilities support

ASFS provides IMCOM with centralized programmatic support for master planning and military construction programming. ASFS is leading and coordinating the execution of facilities requirements analyses and planning charrettes as Army

installations plan to move more than 140,000 personnel over the next five years to support Army Transformation and Base Realignment and Closure initiatives.

Support includes:

- managing program resources,
- normalizing costs associated with requirements analyses, planning charrettes and Office of the Assistant Chief of Staff for Installation Management/IMCOM-directed studies,
- ensuring consistency of products, and
- performing quality assurance of services and deliverables provided by districts and contractors.

ASFS provided discrete planning products as tasked by IMCOM, which included infrastructure assessments, preparation of area development guides and development of specific facility type analyses. ASFS provided 1,281 economic analyses for relocatable facilities at 39 installations, including lease-or-buy analyses and source-of-funding determinations for relocatable buildings support to Corps districts and to installations putting together relocatable facility



The Fort Benning Physical Fitness Center was the first one completed using the Centers of Standardization concept. The natatorium at the fitness center includes a lap pool, a recreational pool with a fountain and a hot tub. Photo by Jay Clark

request packages. ASFS supports Corps Headquarters' execution of MILCON Transformation by coordinating and integrating facility planning, programming and acquisition planning support.

A MILCON Transformation Center of Standardization

MILCON Transformation is the deputy assistant secretary of the Army for installations and housing directive to revise the MILCON acquisition and construction processes to provide cost-effective facilities in a timely manner. Centers of Standardization are part of that effort. ➤

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The DASA-I&H is required by law to notify Congress of his intention to execute a project costing more than \$7.5 million. Although not specifically required by law, he gives Congress 14 to 21 days to ask questions or make comments on these high-dollar projects before he approves them.


This year was unusual in that about three-quarters of the fiscal year passed with the Army working under continuing

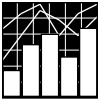
resolutions. Not knowing FY 2007 funding levels caused garrisons to delay submitting project approval requests. Roughly half of the total number of projects was approved within the last six weeks of the fiscal year. This created a workload challenge in the DASA-I&H office. His staff worked long hours to ensure timely approvals were provided.

Keep in mind that this end-of-year rush to have projects approved is not necessary. Maintenance and repair project approvals

are good until the project is completed. Do not wait. Submit early in the fiscal year for repair projects you intend to execute. After all, the approval can be good for years.

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Huntsville Center leads COS efforts for 16 facility types. Each COS is the Army's life-cycle manager for its assigned facility types.

Ranges and Training Land Program

The RTLTP provides program management and engineering support to the Army's Range Modernization Program, which consists of more than 285 projects throughout the Army. Support includes:

- establishing engineering criteria and standard designs,
- initial planning and site selection,
- facilitating planning charrettes, and
- preparing MILCON programming documentation for Army G-3-funded training ranges.

The RTLTP provides programmatic oversight and technical support to Corps districts responsible for design and construction of range projects. The new range planning process includes a multi-disciplinary Army Training Support Center, RTLTP Mandatory Center of Expertise,



Mitch Duke, technical engineer for the Pentagon renovation, inspects the new filters for the Pentagon's heating, ventilation and air conditioning controls system. Photo by Andrea Takash

Ordnance and Explosives Center of Expertise, Program Executive Office-Simulations Training and Instrumentation and Army Environmental Center technical team assessment process in the planning charrettes.

Project assessments evaluated the executability of the project for training capability, surface danger zone capability, constructability and standard design compliance, National Environmental Policy Act supporting documentation and issues, telecommunications infrastructure and unexploded ordnance.

Facilities Reduction Program

The FRP supports the Army's Operations and Maintenance- and Army Family Housing-funded program to remove excess and obsolete facilities worldwide. Huntsville Center provides centralized planning and management with decentralized execution by installations and Corps districts. During fiscal year 2007, more than 400 structures, accounting for more than 1.6 million square feet in excess facilities, were removed from the Army's real property inventory. The program achieved cost savings of more than \$3.3 million in FY 2007 by tighter funds control and diligently using industry best practices and innovative means.

This program continued to make process improvements that included:

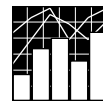
- implementing the use of thermal convection methodology to more cost effectively remediate explosive contamination,
- mentoring contractors to use scrap metal brokers to gain better market value,
- awarding a new contract type to capitalize on small business contractors to more cost effectively remove small structures,
- using the national indefinite-delivery, indefinite-quantity contract, and
- sharing these and other means and methods on the FRP Team Page on the Engineering Knowledge Online web site.

The national IDIQ contract uses an improved acquisition strategy with standardized contract language to ensure use of industry best practices, thus improv-

ing recycling and waste stream reduction. Additional examples of tighter funds control include not performing unnecessary lead-based paint abatement and using the appropriate asbestos abatement standards for demolitions versus renovation standards. Crushing concrete and brick and using them on site as engineer fill substantially reduces costs.

The web-based FRP Best Practices Toolbox, <https://eko.usace.army.mil/frp-toolbox/index.cfm>, provides a standardized, regionally sensitive cost-estimating tool, economically feasible waste stream diversion percentages, recommended best practices from lessons learned and easy access to an electronic technical library. ISCX has developed and uses an Installation Status Report, Real Property Planning and Analysis System and Integrated Facilities System data query-and-comparison approach that enhances the garrison's ability to make more informed decisions on long- and short-range facilities planning. ➤

Acronyms and Abbreviations	
ACP	Access Control Point
ACPP	Access Control Point Program
ASFS	Army Stationing Facilities Support
BRAC	Base Realignment and Closure
COS	Center of Standardization
DoD	Department of Defense
DPW	Directorates of Public Works
EEAP	Energy Engineering Analysis Program
ESPC	Energy Savings Performance Contracting
ESS	Electronic Security Systems (Program)
FRR	Facilities Repair and Renewal (Program)
FY	Fiscal Year
FRP	Facilities Reduction Program
IDIQ	Indefinite-Delivery, Indefinite-Quantity (contracts)
IMCOM	Installation Management Command
IMMSS	Integrated Modular Medical Support Systems
ISCX	Installation Support Center of Expertise
MRR	Medical Repair Renewal (Program)
MILCON	Military Construction
O&M	Operations and Maintenance
OACSIM	Office of the Assistant Chief of Staff for Installation Management
OMEE	Operations and Maintenance Engineering Enhancement (Program)
PM-FPS	Product Manager for Force Protection Systems
REM	Resource efficiency managers
RTLTP	Ranges and Training Land Program



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Utility rate interventions

In a joint effort with the U.S. Army Regulatory Law Office, the Commercial Utilities program ensures that the costs of utilities services remain fair and reasonable for Army installations. Since 1999, this program has achieved \$68.5 million in cost avoidance for the Army.

During FY 2007, ISCX initiated five rate intervention and negotiation proceedings. Due to the complexity and issues involved, four cases are still before the respective public service commissions for final ruling. Industry publications and state commission web sites indicate that during FY 2008, about eight requests for utility rate increases can be expected.

Utility rate surveys

In support of and funded by IMCOM, 19 installation utility and assessment surveys identified \$4.6 million in savings and cost avoidances. These savings primarily result from installations now using the correct tariff schedules, taking advantage of demand-side management actions and installation of energy-management control systems.

Army Metering Program

The prerequisite program management and acquisition planning was completed in FY 2007 to permit start of execution as soon as FY 2008 funding is received. The \$23 million FY 2008 work plan includes installing advanced meters for electricity and natural gas at 22 major installations within the continental United States and the planned award of a centralized Army meter data-management system software and support contract.

When completed in 2012, the Army will have one of the world's largest advanced meter networks for monitoring energy consumption of electricity, natural gas and potable water. The resulting quantum leap in real time information and accountability for energy use will significantly reduce waste, improve efficiency and reduce cost.

During FY 2007, specifications were

developed and disseminated for the advanced metering equipment; stakeholder meetings with DPW energy managers established the minimum functional requirements of the meter data management system; and extensive market research was performed on industry offerings related to advanced metering.

Energy Savings Performance Contracting

ESPC is a major tool used to achieve energy savings. Contractors provide the financing and perform energy-related infrastructure improvements, and the government repays the contractors from the resultant energy cost savings over a period of up to 25 years.

Energy contractors have invested more than \$418 million in 70 energy-related infrastructure projects at 30 Army installations.

Energy Engineering Analysis Program

EEAP analyzes energy use at installations and provides options for reducing energy consumption. Working with partners, ISCX completed seven surveys — Fort Belvoir, Va.; Aberdeen Proving Ground, Md.; Fort Drum, N.Y.; Fort Bliss, Texas; Fort Rucker, Ala.; Fort Lewis, Wash.; and the U.S. Military Academy at West Point, N.Y.

Analysis completed for five sites to date project an estimated annual savings of \$26.4 million with an initial capital investment of \$110.5 million.

Resource efficiency managers

Huntsville Center contracts for and provides oversight of REMs, who

increase the effectiveness of installations' energy programs by reducing energy and water costs through the development of cost-effective programs and practices. The program is designed to be self-sustaining in that the savings generated more than offset the costs.

Huntsville's REMs worked with stakeholders to develop contract requirements for a nationwide REM IDIQ contract expected to be awarded in FY 2008.

Access Control Point Program

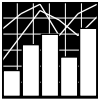
The ACPP provided direct support to the Army's Product Manager for Force Protection Systems, which also includes Automated Installation Entry. This effort will significantly improve gate security while reducing security guard manpower.

During FY 2007, two Automated Installation Entry site preparation projects were awarded for execution — Letterkenny Army Depot, Penn., and Fort Campbell, Ky. — and designs were started for 14 other sites. Physical security equipment was installed at access gates at 63 installations in FY 2007; 11 others are pending completion.

Late in the year, the PM-FPS received an additional \$150 million FY 2007 Other Procurement Army funding for the next, larger round of ACP security equipment ►



Charter Environmental begins the second phase of demolition of Building 408 at Fort Hamilton, N.Y. Huntsville Center's Facilities Reduction Program is working with the installation, New York District and contractor partners to remove three buildings. Photo by Kevin J. Merenda, New York District, U.S. Army Corps of Engineers



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for both continental and overseas Army installations during FY 2008 and 2009. FY 2007 efforts included program and acquisition planning and staffing recruitment actions required to meet this execution challenge.

Furniture

Huntsville Center's furniture program manages the procurement and delivery of furnishings for barracks and administrative facilities Armywide in support of OACSIM and IMCOM. Huntsville Center procured barracks furniture for 39,301 Soldier living spaces in FY 2007, which resulted in \$7 million in programmatic savings. Huntsville Center also procured administrative furniture for 177 buildings, and provided \$2.4 million in barracks and administrative furnishings for Warriors in Transition.

The program uses standardized and efficient processes, including electronic ordering. New missions for FY 2007 were provision of administrative and barracks furniture for new BRAC and MILCON facilities.

Integrated Modular Medical Support Systems

IMMSS provide standardized, modular furnishings for U.S. Army medical facilities worldwide. IMMSS are modular, reusable, reconfigurable furniture systems that meet medical facility codes and standards and provide finishes that meet the Army's interior design standard for medical facilities. The systems are durable, easily cleanable and can be used in office spaces as well as treatment and exam rooms, and medical support areas.

The program purchases and installs IMMSS for hospitals, clinics, pharmacies, laboratories, administrative and other medical facilities. Other services include design, reconfiguration and restoration of existing systems, maintenance, clinical analysis, fabric panel replacement, inventory and product orientation training.

In FY 2007, 168 task orders were awarded valued at \$17.2 million for 46 different facilities. In support of Army BRAC medi-

cal facility missions in FY 2008-12, the program will expand to include non-IMMSS "loose" furniture and medical equipment.

Medical Repair Renewal Program

MRR offers a fast-track, efficient method for design and execution of all types of medical facility repairs, renovations and minor construction. MRR provides program and project management, engineering, contracting and construction support to multiple Department of Defense and non-DoD agencies and locations nationwide.

The program awarded more than \$112 million in medical facility repair and renovation projects in FY 2007 for the U.S. Army Medical Command, U.S. Air Force, U.S. Navy and the Department of Veteran Affairs. MRR also supported the local Corps districts and installation DPWs in the execution of various medical projects that could not be executed with available district or DPW resources.

Facilities Repair and Renewal Program

FRR also provides program and project management, engineering, contracting and construction support to multiple DoD and non-DoD agencies and locations worldwide. The program offers streamlined design-build repair, renovation and minor construction efforts on accelerated schedules.

Highlighted FRR efforts in FY 2007 include ACP work, hurricane recovery work, barracks improvement projects, Department of Homeland Security projects supporting Immigration and Customs, and high voltage power distribution/switchgear projects at Fort Wainwright, Alaska.

Due to BRAC workloads, many districts and DPWs requested Huntsville Center's FRR services in FY 2007. Huntsville Center served as a relief valve for the districts and DPWs regarding execution of these "smaller" O&M projects. Use of the FRR program versus traditional methods resulted in cost and time savings in excess of 25 percent in some cases.

O&M Engineering Enhancement Program

OMEE was established to provide facility O&M services for DoD medical

treatment facilities. The program awards task orders to one of the qualified medical maintenance contractors under the OMEE IDIQ contracts. Support includes the full range of O&M services — preventive maintenance, corrective maintenance, minor renovation projects, grounds maintenance, pest management, equipment inventories, condition assessments, aseptic management services and biomedical equipment maintenance.

Currently, OMEE provides O&M services for 37 Army, Navy and Air Force medical centers for an annual value of \$65 million.

Electronic Security Systems Program

ESS awarded about \$25 million in electronic security system contracts to push total current workload to an average of 80 projects and \$98 million. The program supported customers at many Army garrisons, the National Guard Bureau, Marine Forces Reserves and other federal agencies.


Huntsville Center participated on the New York District's award-winning project delivery team that supported the New York City Water Supply Security Enhancement Project.

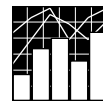
ISCX offers expertise

The ISCX links state-of-the-art business practices and innovative processes in its partnership with Corps districts and other organizations to provide comprehensive and cost-effective support to DoD installations. Through centralized management with decentralized execution, ISCX leverages program management, engineering, contracting and legal matrix expertise imbedded in its virtual project delivery teams.

The ISCX takes pride in its contributions to the quality of life of service members and to military installations, and looks forward to continued service in meeting an evolving array of challenges.

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Master planning sets vision for great communities

by Jerry Zekert

In 2007, the Army master planning community initiated a vibrant program that enabled the Army to implement a vast Military Construction program to support Base Realignment and Closure and various restationing actions and also set the foundation for installations to apply a broad vision for great sustainable bases that meet future national defense capabilities.

The master planning team — with members from the Installation Management Command, the Office of the Assistant Chief of Staff for Installation Management and the U.S. Army Corps of Engineers — has been working tenaciously. The team enabled and assisted a broad planning community that has been able to respond to rapidly changing conditions.

The Army has focused on three master planning tenets: professional planning practice, Planning Community of Practice training and development, and effective planning execution.

Professional planning practice

The art of master planning is a process led by professionals knowledgeable in the practice of planning. Over the year, the Army embraced various practices to ensure planning follows current professional precepts. These include:

- championing visioning planning processes that are grounded around long-range urban planning principles;
- introducing the concepts of sustainable planning and development by embracing mixed-use development and holistic neighborhood development;
- advocating the use of area development plans to ensure comprehensive planning is being considered; and
- introducing planning visualization techniques to the planning community.

Planning practice documentation was updated and completed with the publication of the Master Planning Technical Manual. This two-year effort involved a



Jerry Zekert
Photo by Mary Beth Thompson

team composed of people from IMCOM, several installations and USACE.

Training and development

The planning profession, in particular, must maintain its edge in understanding the various aspects of master planning. The Army's master planning training development program is second to none in the Department of Defense. With a vibrant suite of planning courses, workshops and articles, it has kept the planning community up-to-date on current practices.

USACE built on its long-standing planning course, now in its 23rd year. It added courses on advanced planning techniques, which includes a studio-based learning experience, and master planning visualization techniques, in which students can learn how they can translate ideas into 3-D planning concepts. Further, the Installation Management Institute's Planning Tract and the Army Planning Symposium held during the American Planning Association annual meeting offer planners insights that help them meet the current challenges on base.

Garrison commanders are provided master planning training with both lectures and hands-on exercises to better understand the effect of installation master planning in defining the vision for base development.

More than 230 students participated in these training venues in 2007.

Effective planning requirements

Championing effective planning practice with sound professional training and development translates into great program execution. In 2007, planning program execution has seen tremendous improvements. Many installations have recommitted to investment in planning.

USACE revitalized its planning support effort when it implemented its Worldwide Military Programs Operations Order. The Op Ord included master planning support that focuses on strong, geographically based planning support for our installations, skilled program managers trained in planning and robust USACE capabilities.

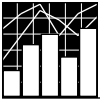
There are many vignettes of successes occurring in several districts, such as Savannah, Fort Worth, Sacramento, Seattle and others. Working closely with installations and IMCOM staff, districts are providing the planning expertise expected by the Army. USACE centers, including the Installation Support Center of Expertise and the Engineer Research and Development Center, complement USACE's comprehensive planning support to ensure the Army has all the capabilities needed to support its master planning requirements.

By its very nature, the planning program is ever evolving and improving. More successes are expected in 2008. Look forward to seeing more about planning efforts in the January-February edition of the *Public Works Digest* and to participating in the annual Army Planning symposium at the Federal Planning Workshop in Las Vegas in April.

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Acronyms and abbreviations:	
IMCOM	Installation Management Command
Op Ord	Operations Order
USACE	U.S. Army Corps of Engineers



Three ways Corps lab supports sustainable installations with science, technology

by Dana Finney

The Army's 2007 *Installation and Environment Strategic Plan* sets out major goals anchored by leadership, transformation and sustainability. Achieving these ambitious objectives demands a growing reliance on innovation, technology, informed decision making and strategic planning.

The U.S. Army Engineer Research and Development Center provides products and services that are helping installations meet today's challenges while planning strategically for future science and technology needs. ERDC's Construction Engineering Research Laboratory is uniquely focused on sustainable military installations. CERL's two business areas are environmental quality and infrastructure.

In addition to research and development, CERL can bring its expertise to the field on a reimbursable basis. The lab maintains extensive partnerships with academia, other government agencies and industry that can bring added value to the services provided at installations. Following are three examples of ERDC's installation research activities over the past year.

Chem-bio models for water systems

Introduction of a chemical or biological poison to the post water supply and distribution system could have a serious impact on readiness if not detected in time to take countermeasures. Despite the commercial availability of numerous sensor types, simply carpeting the water pipes with these devices is not a realistic solution to monitoring for CB hazards and responding.

First, any sensor scheme would still require a complex model to make sense of the data, which varies from point to point. In addition, because of the large number of sensors required for a typical system — some 1,400 — and the tendency of insoluble impurities to adsorb or adhere to the surfaces, maintenance costs would be prohibitive.

Current hydraulic models and simula-



After blast testing of this hung window specimen, despite a small tear in the laminated glazing interlayer, no large glass fragments entered the reaction structure, so the window passed the test. Photos courtesy of U.S. Army Corps of Engineers.

tions do not account for potential interactions of CB contaminants with the pipe wall. However, interactions are a very real possibility and must be modeled dynamically to ensure accurate vulnerability assessments and emergency response planning exercises. For example, a fat-soluble biological agent, repelled by water, could take up residence in the pipes' biofilm and continue to release biotoxins.

CERL's CB research addresses these gaps and will result in products to more realistically model and simulate CB transport in water systems. The program seeks to characterize sorption and desorption kinetics of various contaminants with common pipe wall materials like concrete, polyvinyl chloride, copper, biofilm and corroded metals. The lab is also analyzing reaction rates of these CB agents with the chemicals in chlorinated water and conducting realistic simulations of multiple contaminants and concentrations.

Several installations have been identified as pilot test sites for CB monitoring. Fort

Drum, N.Y., which already has a robust Supervisory Control and Data Acquisition system in place, will be the first site to have equipment installed for end-to-end water monitoring that includes a sensor-enabled simulation tool. The simulation tool will be able to translate raw sensor information into an easily interpreted depiction of the distribution system. Forts Leonard Wood, Mo., and Sill, Okla., will also participate in pilot tests during fiscal year 2008.

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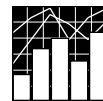
Blast-resistant windows for historic buildings

In response to Base Realignment and Closure and rebasing decisions, installations are seeking to reactivate some of their mothballed historic properties. Many of these buildings require renovations both for quality-of-life issues and to meet current safety codes.

One example is compliance with Unified Facilities Criteria 4-010-01, the Department of Defense's minimum antiterrorism standards, which places strong emphasis on window performance under blast conditions. Historic buildings must comply with additional guidance, namely the *Secretary of the Interior's Standards for Rehabilitation* (35 Code of Federal Regulations, Part 67), mandating use of replacement materials that match the original architecture as closely as possible.

Despite the proliferation of manufactured windows marketed as blast-resistant, these claims are often not validated by scientific blast-load testing. Further, until recently, only a limited number of manufacturers offered products that meet the esthetic requirements for historic structures.

In 2007, CERL completed a study to test windows showing potential to meet both the antiterrorism and historic architecture criteria. The intent was to provide DoD with manufacturer-independent



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CERL is working with Headquarters, USACE, and other agencies to develop guidance for dealing with debris from disasters in an environmentally sustainable way.

blast-performance data along with guidance on selecting replacement windows for historic buildings.

The types of windows tested were limited to the hung and factory types, which were widely used in military construction in past years. CERL identified 18 companies as producing windows that might meet the study requirements. Based on manufacturers' responses to a detailed pre-qualification sheet, two were selected for product assessment. A contractor who specializes in shock tube testing for windows conducted the tests. In evaluating the results, CERL consulted with the U.S. Army Corps of Engineers' Protective Design Center, Omaha, Neb.

Both types of historic replacement windows exceeded the criteria applied from American Society for Testing and Materials standard 1642 for the specified pressure and impulse. CERL published the results in a technical report, which includes directories of U.S. blast test facilities and window manufacturers capable of producing SOI-compatible windows. The report, ERDC/

CERL TR-07-39, can be downloaded from the DENIX web site, <https://www.denix.osd.mil>.

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Reducing debris from natural disasters

Readiness could be affected at installations in regions prone to natural disasters — such as hurricanes, floods, earthquakes and tornadoes — due to debris from damaged buildings and structures. This effect could be especially critical, for example, at a National Guard installation that needs to mobilize and provide regional rescue and relief.

Debris obstructs roads, runways and access to critical infrastructure like utilities and health care facilities. Further, buildings that are damaged beyond repair can pose hazards to the public.

While removing debris in a timely and economical manner is critical, equally important from an environmental perspective is managing debris. The private market and the Army are already incorporating

debris reduction into their construction and demolition practices. Natural disaster debris reduction is now being recognized as a high priority requirement.

The path of least resistance has been to remove building debris as quickly as possible and haul to staging sites or landfills. Experience in the aftermath of Hurricanes Katrina and Rita, however, illustrate how environmental systems can be stressed by the disposal of vast quantities of debris. If nothing else, landfill capacity that was once estimated to last decades will now be exhausted within months. Diverting debris materials from landfill disposal will reduce the adverse impacts of disposal.

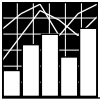
CERL is participating with a Headquarters, USACE task group to reduce building debris streams from natural disaster sites. Guidance is being developed for deconstructing damaged structures to salvage and recycle materials instead of disposing of them in landfills.

CERL is also participating with a Department of Energy team to, among other goals, recover usable building materials and provide inexpensive construction supplies to the community to assist their repair and recovery efforts. The Headquarters, USACE guidance and DoE research will be available in fiscal year 2008.

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Dana Finney is a public affairs specialist at ERDC-CERL in Champaign, Ill. Mark Ginsberg, Julie Webster and Tom Napier, ERDC-CERL researchers, contributed to this article.

Acronyms and Abbreviations	
CB	Chemical or Biological
CERL	Construction Engineering Research Laboratory
DoD	Department of Defense
DoE	Department of Energy
ERDC	Engineer Research and Development Center
SOI	Secretary of the Interior
USACE	U.S. Army Corps of Engineers



Europe District's business sees growth

by Justin Ward

The past year has been one of development and performance for the U.S. Army Corps of Engineers, Europe District.

Development

As North Atlantic Division's forward support district, Europe District's biggest development in 2007 was in sheer geographic size, potentially gaining engineering responsibility for some or all of the 10 African countries now included in the U.S. military's newest combatant command, U.S. Africa Command.

The countries — Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Somalia, Seychelles and Sudan — bring with them one existing U.S. military base, Camp Lemonier in Djibouti, and many budding engineering challenges.

Historically, the district has executed about \$5.6 million each year in support of projects in Africa. In the future, however, the District may be called on to support more exercises, training and humanitarian assistance efforts, and to promote U.S. national security objectives to strengthen regional stability.

The district's geographic development in 2007 also encompassed new assignments in Eastern Europe, including support for the U.S. Missile Defense Agency in Poland and the Czech Republic, for Joint Task Force-East in Romania and Bulgaria, and for NATO's Civil Military Emergency Preparedness program in Bosnia, Georgia, Kazakhstan, Macedonia, Moldova, Romania, Ukraine and Uzbekistan.

Financially, Europe District's overall program is bigger than it has ever been, expanding 22 percent in 2007. Most illustrative of this development is the district's construction portfolio, with increases of 86 percent each in the housing and Operations and Maintenance, Army barracks programs, 45 percent in the Efficient Basing-Grafenwoehr program and 145 percent in the program to support the U.S. Air Force in Europe.



David Vale, the Military Operations in Urban Terrain project manager, overlooks the casbah section of the recently completed project in the Negev desert. Photos by Justin Ward.

The district has also seen vibrant development in many other areas, including a 244 percent increase in its Support for Others program and a 570 percent boost in its design services to the U.S. military's European medical community.

Finally, Europe District has developed in its relationship with its regional counterparts through actively assisting with the Base Realignment and Closure process. The district provided technical support, shared knowledge and remained flexible when supporting requirements.

Realignments and closures affect the entire region, and Europe District will continue to be responsive and reliable in its partnerships. It will apply the same business processes and practices learned down range and through its mobilized engineering teams to execute work virtually.

Performance

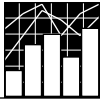
Europe District also stayed committed to its strategic partners in 2007. The district's commitment to helping these partners solve their toughest engineering challenges translated into the execution and completion of several unique projects.

Several of these projects were in the small Caucasus country of Georgia. Here, the District helped with the design of a police academy and a forensics lab for the Department of State's Bureau of International Narcotics and Law Enforcement Affairs program; the construction and renovation of a hospital, a school and an orphanage as part of the U.S. European Command's humanitarian assistance program; and the design and construction of an airfield and several border crossing stations, one of which led to the thwarting of an attempt to bring a dangerous mixture of plutonium and beryllium into the country.

Other unique projects completed included: the Army's most modern dental and health clinic in Europe, located in Grafenwoehr, Germany; the Army's largest shopping complex in Europe, also in Grafenwoehr; the design for two hospital projects in the U.S. Central Command's area of responsibility in support of the Global War on Terror; and the construction of the largest Military Operations in Urban Terrain site in the world, located in Tse'elim, Israel.

The district's area office in Israel





An aerial overlook flight of Germany's Grafenwöhr installation in March 2007 reveals Netzaberg Village's MILCON Island projects, including elementary and middle schools, a child care center, a youth activity center, a chapel, ball fields and a new infrastructure network. The U.S. Army Corps of Engineers, Europe District, is managing the construction of this project.

also saw the completion of the last of the Wye River projects, which were part of the 1998 political agreement negotiated between the Israeli and Palestinian governments to bring stability to the region. It also completed the \$14 million modernization of a shipyard used by the Israeli Navy and the U.S. Navy's Sixth Fleet.

The district has a proud history of service in Israel and was honored to take part in these projects, which helped the nation maintain its qualitative military edge over other countries in the region that threaten its security.

Finally, the district's performance was highlighted through its world class workforce.

Ten district employees served their country in Iraq this year. Six others deployed to Afghanistan, and one deployed in support of Hurricane Katrina reconstruction.

Many other employees were nominated for their service, including 36 who were recognized for outstanding reach-back support for their design, solicitation and award of about \$65 million in projects in Afghanistan, Iraq and Kuwait.

Fifteen others were awarded for their dedication and teamwork in implementing the National Security Personnel System within the district.

Bernie Rodriguez, acting chief of Project Management, was selected in April as a *Role Model of the Week* on the web site of the Hispanic Engineer National Achievement Award Corporation.

Tania Smith, acting Environmental Branch chief, was selected by the Career Communications Group as a *Women of Color Technology All Star*.

And Adolphus Madukanya, civil engineer, was recognized for professional achievement at the 2006 *Black Engineer of the Year Awards*.

This past year's challenges have shown how truly global Europe District's reach is, spanning 103 countries on three continents. The district's growth and performance in 2007 required long hours, transformational thinking and strong execution.

By setting milestones, communicating with its customers and clients every day and learning how to combine its regional strengths and resources to deliver a stronger and more complete set of products and services, Europe District has achieved enduring results and is well on its way of transforming from good to great.

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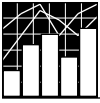
Justin Ward is a public affairs specialist, U.S. Army Corps of Engineers, Europe District. 



Soldiers training for the Expert Field Medical Badge, the non-combat equivalent of the Combat Medical Badge, enter "The Trench" during the first run of training on Landstuhl's new litter obstacle course site, whose design and construction was managed by the U.S. Army Corps of Engineers, Europe District.



Lt. Col. Mike Summers (right), Europe District's Romania office area engineer, updates Col. Kevin Beerman (left), U.S. Army Europe's deputy chief of staff for Engineering, while Michael Hogg, Europe District project manager, Col. Margaret Burcham, Europe District commander, and an unidentified Soldier listen.



Fort Hood: First Sergeant's Barracks Initiative means only the best

by Kenneth Fyffe and Christine Luciano

As the Army transforms, the Housing Division at Fort Hood, Texas, continues to do the same by incorporating customer-focused initiatives that improve the quality of life for Soldiers and their Families. The Housing Division started with a Residential Community Initiative that focused on improved services and building energy-efficient, quality homes for military Families. This year, the Housing Division started a new effort called the First Sergeants Barracks Initiative, which focuses on single Soldiers and their billeting units.

The FSBI provides an opportunity for the Housing Division and the unit's non-commissioned officer leadership to partner together and improve the overall quality of life for more than 15,000 single Soldiers stationed at Fort Hood. The FSBI team takes the administrative burden off the unit. This means the unit does not have to worry about keys, work orders and furniture management.

And Soldiers no longer have to be concerned about what condition their new quarters will be in. The FSBI team follows the acronym "RACKET," which represents their motto: Rooms Assigned Clean and Kept Every Time.

It takes a team

During the past year, the Housing Division focused on improving FSBI. By streamlining many of its processes and operating other aspects that have traditionally been real property functions — such as issuing keys and replacing broken or missing furniture, the Housing Division is able to operate more efficiently and better attend to the Soldiers' needs.

"With the Global War on Terrorism, the need for FSBI is critical," said Robert Erwin, Fort Hood housing program manager. "Our redeploying Soldiers deserve a decent place to live, and FSBI provides just that. While acting as an extension of the military unit, we provide the administrative

support for managing barracks, allowing the units to focus on their warfighting mission."

Now fully staffed, the team manages the entire barracks inventory on Fort Hood. FSBI has resulted in user-friendly service order procedures, extended hours to provide service 24/7, and identifying and focusing on the customers' needs. These improvements foster a better quality of life for Soldiers.

The team further expanded when staff realized that a large number of service orders were being called in to the Directorate of Public Works. Almost 47 percent of service orders called into the work order desk involved barracks-related issues. To quickly respond, a team was formed to focus solely on barracks maintenance. As a result of the dedicated maintenance team, there was better coordination of and a quicker turnaround in completing work orders.

The FSBI team also streamlined the process of furniture replacement and exchange by having a dedicated furniture management office delivery team. This created efficient use of FMO's available resources and a team focused on providing furniture to Soldiers in the barracks.

"With a dedicated FMO team, we are able to quickly assist the FSBI team and provide furniture for our Soldiers," said Joseph Truelove, manager of the FSBI FMO operation.

Convenient locations

Across Fort Hood, there are three large barracks areas. To provide convenience, customer care and service, the FSBI team created 11 barracks teams and located them within the assigned barracks' footprints. However, the areas are still large.

Previously, Soldiers would report to an



Karen Maitlen, Team 3 barracks manager, discusses forms with Soldiers from the 3rd Armored Cavalry Regiment during one of several deployment briefs given by the FSBI at Fort Hood, Texas. Photo by Kenneth Fyffe

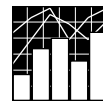
office, in-process and then may have had to walk a considerable distance to their assigned barracks. Now, after in-processing, Soldiers and their luggage are given a ride by one of the FSBI team members in an electric cart.

The FSBI team has 18 electric carts that make life a little more pleasant for their customers. The electric carts operate on batteries and require a 110-volt outlet to recharge. In the long term, the electric carts are more environmentally friendly and cost-effective than the former methods of transportation.

The electric carts also easily navigate the road network, which makes access to the billets easy. This convenience means greater work productivity for each FSBI team member and more time taking care of Soldiers. ➤

Acronyms and Abbreviations

FMO	Furniture Management Office
FSBI	First Sergeants Barracks Initiative



Corps makes it easier to get environmental cleanup help

by Candice Walters

It's been a year of changes for several environmental programs within the U.S. Army Corps of Engineers. With four new initiatives — the Environmental and Munitions Center of Expertise, Military Munitions Support Services, the Center for the Advancement of Sustainability Innovations and the transformation of the Formerly Used Defense Sites program — USACE is making it easier for people within the Department of Defense and the Army to find expertise and assistance.

Environmental and Munitions Center of Expertise

In the past, people with hazardous or radioactive waste cleanup questions contacted the Corps' Hazardous, Toxic and Radioactive Waste Center of Expertise. Those with military munitions cleanup issues went to the Military Munitions Center of Expertise.

Now both kinds of inquiries can be handled by one mandatory center of expertise, the Environmental and Munitions Center of Expertise. At this center, individuals can obtain information and support on any environmental cleanup issue. The newly combined EM CX builds upon the strengths of both centers and the similarity of missions. The combination increases both efficiencies and the potential for streamlining personnel, processes and

realignment costs.

"This really embraces the 'one-door-to-the-Corps' approach," said David Jaros, who just concluded a detail as the acting chief of the former Hazardous, Toxic and Radioactive Waste Center of Expertise. "The biggest benefit our customers will see is that they will be able to get support on any environmental cleanup issue from one USACE organization."

Military Munitions Support Services

The Military Munitions Support Services strategy encompasses the full spectrum of military munitions work executed by USACE, from conventional munitions and chemical warfare materiel such as that encountered through the FUDS program, to support of various overseas missions involving munitions such as those in Iraq. Its mission is to share military muni-



A Corps of Engineers contractor samples the sewage in a lagoon at Holloman Air Force Base, Alamogordo, N.M. Photo by Harry Weddington

tions best practices and resources across the Corps to better support the warfighter and other customers. ➤

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Working with leadership

The FSBI team's success would not be possible without strong partnership with the leadership. The most important role for the FSBI team and the leadership is that of taking care of Soldiers. Master Sgt. Walter Romanburgos of the 15th Sustainment Command recognized the value of the FSBI teams while planning for the command's redeployment.

"The FSBI Team has been instrumental to the success of our redeployment opera-


tions," he said. "The team has shown a lot of dedication and respect for our Soldiers every time they visit their office. The FSBI team is a group of professionals that have high standards and are dedicated to supporting the mission."

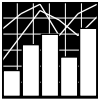
More is being asked of Soldiers and their leadership. Fort Hood's FSBI team is on the forefront of improving the Soldiers' quality of life. Having that reliable tool the unit's leadership can depend on, anytime and under any conditions, helps relieve some of the traditional requirements and allows the unit's leadership to focus on

their primary objectives.

The FSBI team's focus on customer service and care contributes to meeting the needs of Soldiers and providing the best support.

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Kenneth Fyffe is the area barracks manager and Christine Luciano is the environmental outreach coordinator, Directorate of Public Works, Fort Hood, Texas. 



(continued from previous page)

Carol Youkey, former chief of the Military Munitions Center of Expertise, was named the new special assistant for M2S2. M2S2 gathers all Corps munitions programs into a unified configuration, with the goal of delivering improved management and execution of those programs — creating a virtual toolbox of military munitions services the Corps can provide.

The U.S. Army Engineer Research and Development Center assists M2S2 with munitions-related research, development, test and evaluation services. The new strategy also embraces the work done by the Range and Training Lands Program Center of Expertise, which supports the design and construction of range projects for active duty Army installations.

Center for the Advancement of Sustainability Innovations

The Center for the Advancement of Sustainability Innovations functions as the hub of a network, linking expertise in ERDC with numerous center partners, including the Center for Sustainable Design at the University of Illinois, the national defense Center for Environmental Excellence, the National Renewable Energy Laboratory, the U.S. Army Engineering and Support Center, Huntsville and many others.

Housed at ERDC's Construction Engineering Research Lab in Champaign, Ill., CASI's mission has three overarching roles:

- providing expertise in sustainable planning and design, including linking people with a community of experts via the Internet;
- facilitating sustainable strategy implementation by providing systems and materials analysis across the Army's triple bottom line of mission, community and the environment; and

providing a sustainable knowledge environment offering capabilities for collaboration, tools, databases and the transfer of

sustainability technologies.

FUDS Transformation

A leaner, more efficient and focused FUDS program is now operating, thanks to what's called the FUDS Transformation Program. The actual "transformation" was a long time in the making and is a natural progression that follows several years of implementing new policy, the FUDS Information Improvement Plan that has been cleaning up project files and the initiation of statewide management action plans that prioritize FUDS cleanup activities within states.

Instead of 22 districts with project management responsibilities, there are now 13 districts handling that role. However, the other nine districts still play a part by supporting the project managers in working with landowners, regulatory agencies and stakeholders, and providing public affairs, real estate and contract oversight support.

"The number one concern throughout the transformation process was to keep intact relationships that had been built up throughout the years with property owners, regulators and the general public while improving responsiveness," said Robert Lubbert, chief of the Corps Environmental Support Team and head of the FUDS program.

"This focus on relationships has been especially important because many FUDS are privately owned, and the Corps must have the landowners' permission to go on the property to clean it up," Lubbert said. "This has been critical right now as the FUDS program has been working to complete about 765 site inspections at properties suspected to contain military munitions to meet a 2010 deadline."

These assessments collect data that determines if there is a significant risk, if an immediate response is needed and how the site should be prioritized if cleanup action is required, he said.

"Sharing information and expertise with

the public, DoD and the Army continues to be a priority as the Corps' environmental programs work to better serve its customers," said Ed Theriot, chief of the USACE Environmental Community of Practice.

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Candice Walters is a public affairs specialist, Headquarters, U.S. Army Corps of Engineers.



Acronyms and Abbreviations	
CASI	Center for the Advancement of Sustainability Innovations
DoD	Department of Defense
EM CX	Environmental and Munitions Center of Expertise
ERDC	Engineer Research and Development Center
FUDS	Formerly Used Defense Sites
M2S2	Military Munitions Support Services
USACE	U.S. Army Corps of Engineers

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Grow the Force — an Army facilities primer

by Brenda Ellis

The Army's Office of the Assistant Chief of Staff for Installation Management leads the Department of the Army effort to provide world-class facilities to support the Department of Defense's "Grow the Force" initiative. In the Army, Grow the Force is known as "Grow the Army."

In people terms, GTA means that the number of Soldiers increases by 65,000 in the Active Component, 8,000 in the Army National Guard and 1,000 in the Army Reserve, for a total increase of 74,000. The boost in the number of Soldiers is an extension of Army Transformation, the comprehensive strategic change across doctrine, organization, training, materiel, leader development and education, personnel and facilities to build a campaign-quality Army with joint and expeditionary capabilities.

The heart of the transformed Army comprises brigade-based units that contain most of the functions of an entire division, instead of relying on the division to provide various combat service and combat services support slices. These units are called Brigade Combat Teams. The GTA initiative adds six more BCTs to the AC force, for a total of 48 teams.

There are three types of BCTs: infantry, heavy and Stryker. Each BCT will have combat support and combat service support capabilities built in, such as communications, maintenance, engineering, medical and transportation personnel. In addition to its basic infantry, armor or Stryker combat units, each BCT has additional combat capabilities embedded in the form of organic artillery and reconnaissance elements.



This aerial photo taken in October shows Brigade Combat Team facilities under construction at Fort Bliss, Texas. Photo courtesy of the Fort Bliss Master Expansion Program Team



Brigade Combat Team facilities construction is underway at Fort Bliss, Texas. Photo by Dennis Ballog

More than 200 CS and CSS units of varying sizes are being established to support the BCTs, although not necessarily physically located at the same installations. The BCTs must be located in existing facilities or on installations with sufficient space for new facilities. Forty-two BCTs have been established and are housed in existing permanent facilities or in relocatable interim facilities.

Army standards have been established that address brigade and battalion headquarters, company operations facilities, barracks, dining facilities, vehicle maintenance shops and parking and storage. Hand in glove with those facilities are the installation infrastructure and support facilities, plus community support facilities.

Most of the CS and CSS facilities are programmed for construction in the fiscal year 2007 Supplemental, which consists of nine projects at \$250 million, and the FY 2008 President's Budget, which includes 53 projects at \$1.991 billion. However, before construction identified in the FY 2007 Supplemental can begin, the Office of the Secretary of Defense must provide a report to Congress regarding the overall GTA stationing plan.

A Programmatic Environmental Impact Statement is nearing final completion, and the Army plans to announce the Record of Decision in the very near future. Decisions from the final PEIS will be carried into site-specific analysis at the installation level where GTA increases are identified, as required by the National Environmental Policy Act. Installations will have to identify and plan to accommodate these changes with the essential supporting requirements such as:


- installation infrastructure – power, water, wastewater treatment, etc.;
- support – warehouses, petroleum, oils and lubricants storage, ammunition storage, etc.; and
- community support – child development centers, etc.;

into DD1391s. A DD1391 is the standardized information form containing project cost, scope and justification.

All this project documentation will be part of the FY 2009 President's Budget Submission to Congress, due the first week of February 2008. Of course, all that work has to be done in time for OACSIM and OSD to review.

Construction of these facilities will be awarded in FY 2009 as design-build projects, with the intention that the BCTs will be housed in the new facilities in FY 2011.

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Brenda Ellis is an electrical engineer, Office of the Assistant Chief of Staff for Installation Management. 

Acronyms and Abbreviations:

AC	Active Component (of the Army)
BCT	Brigade Combat Team
CS	Combat Support
CSS	Combat Support Services
FY	Fiscal Year
GTA	Grow the Army
OACSIM	Office of the Assistant Chief of Staff for Installation Management
OSD	Office of the Secretary of Defense
PEIS	Programmatic Environmental Impact Statement



Future of installations — still a place to call home

by Kathleen Curd

When I think about the future of installations, what comes readily to mind are such notable trends as Defense-led “purple” installations, increased public-private partnering and privatization, or thinking “green” through sustainable planning, design, and execution practices. While these will undoubtedly be important developments in the future, planning for the future of installations is not primarily about sustaining infrastructure. Rather, we’re actually forecasting the needs of our future customers and the requirements of the mission environment.

As Philip Grone, deputy undersecretary of Defense for installations and environment, observed in his Aug. 17, 2005, remark, installations are “the home of combat power for today and for the future,” and as such, they must stay relevant and capable in a future that can’t be precisely predicted. In a larger context, he also suggested that the true impact of the “innovation that we are building today” is a “sense of place that our personnel, our military Families, call home.”

So in the final analysis, our futuristic creativity, sophisticated capabilities and innovation, must all result in the simplest, most universal of concepts — a place to call home. That said, how can installation planners satisfy this requirement and translate such a cozy abstraction into action?

One way to address this question is to first take a historical perspective, assessing how installations over time have impacted those who live, work, train and play on them.

During World War II, if installations were able to provide “three hots and a cot,” this was enough to meet the essential needs of men and women who came of age during the Depression, when warm, regular meals and a sheltered place to sleep were often luxuries. At the same time, the force was largely conscripted and single, so installation planners gave little, if any, thought to “customer satisfaction” or accommodating Families. The result was mile after mile of



Kathleen Curd
Photo by Steve Oertwig

stark wooden barracks, short on comfort and amenities.

This planning focus persisted, with minor variation, until the end of the Vietnam War, marked also by the end of the conscripted force and the advent of a smaller, but all-volunteer force. Well-known axioms such as, “If the Army had wanted you to have a wife, it would have issued you one,” shifted to recruiting tenets like “the Army enlists Soldiers, but it retains Families.”

A new installation planning era dawned, with an emerging need to be customer centric. Better barracks, single-Soldier initiatives, child development and youth centers, and community centers all signaled the growing recognition that Soldier readiness and the state of installations were tightly linked.

Increasing demand for quality, Family-oriented facilities spurred innovation in installation planning. Design “charrettes” included the voice of the customer as an important part of facility planning, and public-private partnerships emerged as a significant capability in building “communities of choice” for the sons and daughters of an earlier generation who were satisfied with “three hots and a cot.”

As customer focus and business acumen increasingly became key core competencies for installation planners, the stage was set for the most recent era in installation management, which emerged from the

catastrophic events of Sept. 11, 2001.

Now supporting a nation at war, as well as transforming how the military is organized, installation planners also transformed in order to remain relevant, capable and responsive in a rapidly changing environment.

One significant shift for both the Army and the Navy was separating the command and control of mission from base operations.

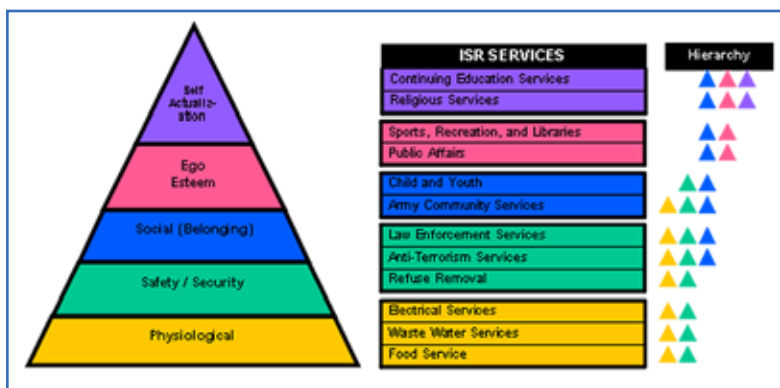
The new commands permitted mission commanders to focus on their war-fighting capabilities, while installation planners formed a worldwide cadre of sorts. In the Army, for example, the Installation Management Agency was activated in October 2002 with an immediate focus on support-

“They [installations] are the home of combat power for today and for the future ... the efficiencies that we are building today, the innovation that we are building today contributes to that combat power and to a sense of place that our military personnel, our military families, call home.”

— Philip W. Grone
Deputy undersecretary of Defense
for installations and environment
Aug. 17, 2005

ing the warfighters, while transforming its business practices to ensure equitable, efficient and effective service delivery.

IMA transformed to the Installation Management Command in October 2006. IMCOM has developed a portfolio of standards associated with organizational structure, facilities and services. For example, IMCOM has been organized under a Standard Garrison Organization, executing to Installation Design Standards. ➤



Mazlov's hierarchy

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Furthermore, in fiscal year 2008, we begin execution of Common Levels of Support, an ambitious, far-reaching and innovative management tool that will enable allocation of resources to more than 400 installation service support programs, resulting in equitable delivery to service standards.

During the development phase of CLS, the Army senior leadership challenged IMCOM to determine the installation services essential to recruiting and retaining the all-volunteer force — clearly underscoring the criticality of customer input and the relationship between Soldier readiness and installations.

In an initial study, 22 existing Soldier surveys and related articles were analyzed to substantiate 10 essential elements that could be directly related to installation services. What was discovered is that military members have different needs at different times, as the quick retrospective of installation planning also demonstrated.

The early 21st century Soldier, for example, has an increased requirement for social belonging — a place to call home. This conclusion was drawn when Soldier-survey data was analyzed in terms of the 95 Army-recognized installation services. Causal relationships were identified with a number of essential elements, which were further analyzed in terms of what is deemed important to the demographic most closely associated with the all-volunteer force.

A useful way to assess relative impor-

tance was Mazlov's hierarchy of needs model, a well-known way of understanding that human needs need to be met in a hierarchical way (see diagram). That is, one's physiological and safety/

security needs need to be met before one can progress "up the pyramid" to have social and ego-esteem needs met.

Put in another way, the World War II-era installation planners were meeting primarily the bottom tier physiological needs with their "three hots and a cot." As installation planning evolved in subsequent decades, planners began addressing the types of facilities and services that addressed higher tiers of human needs, which increased the complexity and scope of installation planning.

Analyzing customer input data in terms of this model begins to identify more specifically what elements are essential to planning a meaningful "place to call home." In this way, the cozy abstraction becomes more tangible and attainable. Significantly, the chief of staff of the Army's focus on Soldier and Family Readiness will require that installation planners understand these essential elements and integrate them into all of their planning and execution activities.

The bottom line is that installation planning for both facilities and services are inextricably linked, and customer data is needed to ensure we're getting it right. In order for installations to remain relevant, capable and responsive in the future, planners must consider the following key elements:

Common service and facility standards: Even if installations are not managed jointly, they will likely be managed to Department of Defense-mandated standards. Transparency and accountability in terms of


cost and performance will be paramount.

Affordable, efficient business practices: Customer expectations and quality standards will continue to rise at a faster rate than available resources. The gap can only be closed by leadership focus and industry-gold standard business practices.

Customer focus: Systems for accessing customer needs must be integrated seamlessly with installation planning, from both the mission and quality-of-life points of view. All installation planning must account for the impact on the end user — commanders, military members, Families, civilians, retirees, surrounding communities and the nation.

In the end, what we as installation planners really need to provide is a "place to call home" — a simple vision that will take a significant level of visionary leadership, business acumen and customer input to achieve.

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Acronyms and Abbreviations	
CLS	Common Levels of Support
IMA	Installation Management Agency
IMCOM	Installation Management Command

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Enhanced Use Leasing: a new way to get things done

by David Ruderman

The Army will soon have free access to a \$100-million, high-speed, hot-weather vehicle testing facility that is being built by General Motors. In exchange for a 2,400-acre lease at Yuma Proving Ground, Ariz., GM will construct and maintain the testing complex, and the Army will be able to test its vehicles there at no cost. GM is also building a paved, dual-lane oval more than four miles long that will allow testing of heavy and tracked vehicles.

The Army estimates the 50-year value of its test-track use at more than \$26 million. The total project value exceeds \$36 million on desert land appraised at \$4.6 million. How is this possible? Through a program called Enhanced Use Leasing.

“What it boils down to is looking for developments compatible to the mission,” said Thomas Kretzschmar, EUL senior projects manager. “It’s a question of identifying a need and a potential solution, and then finding someone in the private sector who sees the situation the same way and can fulfill the need most advantageously.”

EUL, managed by the U.S. Army Corps of Engineers, Baltimore District, unleashes the previously dormant economic potential of unused Department of Defense real property. From hot weather vehicle testing in Arizona to a central utility plant in Maryland and a range of military installation construction projects in between, EUL has fast become a proven means of meeting

a wide range of Army command needs.

The program lets the Army enter into leases with private entities that allow the Army to benefit from land or structures that are defined as “non-excess real property assets.” These properties, which would otherwise produce no economic benefit and often carry resource-draining maintenance costs, can be made to produce revenue for Army installations under the management of private developers.

With EUL, military services can offer project developers long-term leases in exchange for in-kind services that can be used to meet diverse mission related needs. The in-kind services — the “rent” for the property — is immediately available for the installation’s use.

A major attraction for the installation is that it receives the full economic benefit. In contrast to arrangements that involve cash rent payments, the installation receives 100 percent of the in-kind value. And that value is available for use in a very short period of time in comparison to the traditional military construction process.

In operation since 2001, EUL has gone from the drawing board to the real world, all the while gathering momentum. There are about 60 projects of varying sizes currently under way



The Commercial Cogeneration Power Plant EUL project at Fort Detrick, Md., involves about 10 acres of the National Interagency Biodefense Campus on the main post. The developer, the Chevron-Texaco/Keenan Development Team of Washington, will operate and maintain the plant and provide an in-kind consideration to the Army equal to the fair market value of the leased assets. Photos courtesy of U.S. Army Corps of Engineers, Baltimore District

and more in the planning stages.

“It goes beyond the usual office buildings or laboratories of the typical military construction track,” said Kretzschmar. Other product types include renewable energy, alternative fuels and an inter-modal terminal.

“Early projects included the leasing of vacant, environmentally impaired but historically protected buildings at Forts Bliss and Sam Houston in Texas, the Walter Reed Army Medical Center in Washington, D.C., and Selfridge Air National Guard Base in Harrison Township, Mich.,” said Bob Penn, EUL program director.

EUL allows installation commanders a large degree of creativity in identifying potentially beneficial projects. Once an installation has developed an EUL concept, the Corps acts as its real estate agent to bring the concept to reality.

“Typically it’s in response to a need they have,” Kretzschmar said.

Projects conceived under EUL must be both compatible and complementary to the missions of the command and bear a net



This artist’s rendering shows the test tracks being built by GM Corporation for use by the Army at Yuma Proving Ground.



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benefit that is at least equal to the fair value of the real estate assets being leased. The development must also fit within the community surrounding the installation.

Sponsoring commands work with the Corps and its consultants to draft a preliminary proposal. From there a potential project must go up the Installation Management Command chain, through the Office of the Assistant Chief of Staff for Installation Management to the Office of the Deputy Assistant Secretary of the Army for Installation and Housing for approval.

“That process can be as short as 30 days,” said Kretzschmar. “If a project meets with command approval, it will be advertised for availability.”

The project is advertised on www.fedbizopps.gov, by email to EUL web site registrants and on the EUL website, eul.army.mil. At that stage, an informational industry forum is convened at which potential developers can review project details and determine what they can offer the Army. Interested developers then draft and present their proposals for consideration.

When a developer is selected through the competitive process, the Corps and the command begin negotiating the final lease and management plan. All the project participants — from the financial to the environmental, energy to infrastructure — meet to work out the nuts and bolts.

After the EUL is signed, the developer gets to work, and the Corps manages all aspects of the lease terms. The Corps stays involved, managing the financial benefits in interest-bearing escrow accounts for the participating commands.

“We monitor funds on all EUL projects,” Kretzschmar said. “Any installation can go in online, track future money flows and plan how they want to use the money for services in kind.

“Most EUL leases are for 50 years,” he said. “That allows for innovation as projects and command missions evolve going forward. The in-kind services fill a wide variety of unfunded operation and maintenance requirements such as renovating and

repairing old buildings for mission growth.”

At Yuma Proving Ground, the big money is in the free use of the GM test track, Kretzschmar said. It gives the Army a lot of financial return for very little investment.

“It’s the quintessential EUL,” he said. “It just matches the needs of both groups so exactly.”

The EUL agreement was signed June 5, and the project is under construction. It has a tentative completion of late 2008 or early 2009.

“The EUL gave us the means to establish a true win-win process,” said Chuck Wullenjohn, public affairs officer for Yuma Proving Ground. He pointed out that GM, the Army and the local community all benefit from the development.

“This just adds to the test capabilities of the proving ground at no expense to the taxpayer,” he said. “It also expands the job base of Yuma County and gives our young people the opportunity to gain valuable job skills.”

Wullenjohn credited the hot weather testing track EUL as an impetus that pushed Yuma’s Arizona Western College to implement a two-year engineering program that had been under discussion for years.

Both the military and the private sector have been quick to grasp the mutual advantages of EUL, and the number and scope of projects under way has taken off. The General Services Administration apparently agrees. GSA cited the Yuma test track lease when it named the Corps’ Baltimore District as a finalist in its *2007 Achievement Award for Real Property Innovation* in October.

“It’s exploding, and it’s just going to keep growing,” said Kretzschmar. “Renewable



At Picatinny Arsenal, N.J., facility space located inside its mission critical area is being redeveloped for lease under an EUL. Six warehouse-sized buildings on the roughly six-acre site have been demolished. Three new structures totaling 125,000 square feet will replace the old. The developer, InSitech, will also develop and lease a 1.1 million square-foot facility, the Picatinny Applied Research Campus, on 120 acres of land.

energy projects have surfaced as an up and coming area for EUL.”

The program’s powerful economic leverage meshes well with the Army’s commitment to meet 25 percent of its energy needs through renewable sources by the year 2025. A bio-mass cogeneration plant in Arizona and a solar power project in California are already in the pipeline.

“All service branches have EUL authority, as does the Veterans Administration,” Kretzschmar said. “The Air Force has gone forward with its first few EUL projects, and the Baltimore District has shared its expertise with them as well. Other branches of the government, seeing the advantages of the EUL process, would like to follow in their footsteps.”

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Acronyms and Abbreviations

EUL	Enhanced Use Leasing
GM	General Motors
GSA	General Services Administration



Planning to move dirt near a body of water? Ask the Corps first

by Katherine Trott

Many activities proposed on military installations may require permits from the U.S. Army Corps of Engineers if they impact “waters of the United States.” These activities include: adding or expanding base infrastructure such as roads or water and sewer lines; construction of housing; sediment control activities; dredging harbors or marinas; and construction of piers or wharfs.

The Corps has long recommended coordination with the appropriate district office early in the planning process so that the project may be designed to have minimal impacts on the aquatic environment. Improvement of this process is the basis of the recently signed *Memorandum of Understanding between the U.S. Army Corps of Engineers and the Department of the Army for the Purpose of Coordinating Wetland Permitting and Mitigation on Military Bases*.

The memo spells out how installations and Corps districts should work together early in the planning process so that projects are designed to minimize impacts to regulated waters and determine appropriate mitigation — replacement — for those impacts that are unavoidable.

The legislative origins of the Regulatory Program are the Rivers and Harbors Acts of 1890 (superseded) and 1899 (33 U.S. Code 401, et seq.). Various sections establish permit requirements to prevent unauthorized obstruction or alteration of any navigable water of the United States. The most frequently exercised authority is contained in Section 10, which covers construction, excavation or deposition of materials in, over or under such waters, or any work that would affect the course, location, condition or capacity of those waters. Various pieces of legislation have modified these authorities but not removed them.

In 1972, amendments to the Federal Water Pollution Control Act added what is commonly called “Section 404” authority to the program. The secretary of the

Army, acting through the chief of engineers, is authorized to issue permits, after notice and opportunity for public hearings, for the discharge of dredged or fill material into waters of the United States at specified disposal sites. Selection of such sites must be in accordance with guidelines developed by the Environmental Protection Agency in conjunction with the secretary of the Army. These guidelines are known as the “404(b)(1) Guidelines.” The Federal Water Pollution Control Act was further amended in 1977 and given the common name “Clean Water Act.”

The geographic jurisdiction of the Rivers and Harbors Act of 1899 includes all navigable waters of the United States, which are defined as “those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce.” This jurisdiction extends seaward to include all ocean waters within a zone three nautical miles from the coast line that is called the “territorial seas.”

Limited authorities extend across the outer continental shelf for artificial islands, installations and other devices. Activities requiring Section 10 permits include:

- structures such as piers, wharfs, breakwaters, bulkheads, jetties, weirs and transmission lines;
- work such as dredging or disposal of dredged material; or
- excavation, filling or other modifications to the navigable waters of the United States.

The Clean Water Act uses the term



Work in streams and adjacent wetlands requires a Corps permit. Photo courtesy of the U.S. Army Corps of Engineers, Wilmington District

“navigable waters,” which is defined as “waters of the United States, including the territorial seas.” Thus, Section 404 jurisdiction is defined as encompassing Section 10 waters plus their tributaries and adjacent wetlands and isolated waters where the use, degradation or destruction of such waters could affect interstate or foreign commerce.

Activities requiring Section 404 permits are limited to discharges of dredged or fill materials into the waters of the United States. These discharges include:

- return water from dredged material disposed of on the upland, and
- generally any fill material such as rock, sand or dirt used to construct fast land for site development, roadways, erosion protection or other similar use.

Permitting authority is delegated to Corps district commanders, and the Regulatory Program management and administration is focused at the district office level, with policy oversight at higher levels. The backbone of the program is the Department of the Army regulations, 33 Code of Federal Regulations 320-331, which provide the district engineer the broad policy guidance needed to administer day-to-day operation of the program.

These regulations have evolved over time, changing to reflect added authori- ➤



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ties, developing case law and, in general, the concerns of the public. They are developed through formal rule making procedures. If a district engineer has the authority to make a final decision on a permit application and he or she makes that decision in accordance with the procedures and authorities contained in the regulations, there is no formal administrative appeal of that decision.

The basic form of authorization used by Corps districts is the individual permit. Processing such permits involves evaluation of individual project-specific applications in three steps:

- pre-application consultation (for major projects),
- formal project review, and
- decision making.

Pre-application consultation usually involves one or several meetings between an applicant, Corps district staff, interested federal, state or local resource agencies, and sometimes the interested public. The purpose of such meetings is to informally discuss the pros and cons of a proposal before an applicant makes irreversible commitments of resources, such as obtaining funding based on a detailed design.

The consultation provides the applicant

with an assessment of the viability of some of the more obvious alternatives available to accomplish the project purpose. It is also an opportunity to discuss measures for reducing the impacts of the project and to learn about the factors the Corps must consider in its decision-making process.

When a complete application is received, the formal review process begins. Corps districts operate under a project-manager system. One individual is responsible for handling an application from receipt to final decision. The project manager prepares a public notice, evaluates the impacts of the project and all comments received, negotiates necessary modifications of the project if required and drafts or oversees the drafting of appropriate documentation to support a recommended permit decision.

The permit decision document includes a discussion of the environmental impacts of the project, the findings of the public interest review process and any special evaluation required by the type of activity, such as compliance determinations with the Section 404(b)(1) Guidelines.

Of great importance to the project evaluation is the public interest. The public benefits and detriments of all factors relevant to each case are carefully evaluated and balanced. Relevant factors may include conservation, economics, aesthetics, wetlands, cultural values, navigation, fish and wildlife


values, water supply, water quality and any other factors judged important to the needs and welfare of the people. The following general criteria are considered in evaluating all applications:

- 1) the relevant extent of public and private needs;
- 2) where unresolved conflicts of resource use exist, the practicability of using reasonable alternative locations and methods to accomplish project purposes; and
- 3) the extent and permanence of the beneficial and/or detrimental effects the proposed project may have on public and private uses to which the area is suited.

No permit is granted if the proposal is found to be contrary to the public interest.

On average, individual permit decisions are made within two to three months from receipt of a complete application. In emergencies, decisions can be made in a matter of hours. Applications that require Environmental Impact Statements, which are less than 1 percent of all applications, average about three years to process.

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Late-breaking news: facilities regulation is out

The long-awaited Army Regulation 420-1, *Army Facilities Management*, has been issued and is now on the Army Publishing Directorate web site, <http://www.apd.army.mil>.

“The delivery team is happy to make this announcement,” said John Wehmanen, team member, “and is looking forward to making continuous refinements to our product. We hope it will be a valuable reference to the Army’s facilities community.”

The regulation was published initially in PDF format only. The XML version will appear when the coding of this substantial document is completed.

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Water model helps installations address Energy Policy Act requirements

by Paul Landgraff

As a strategic resource, water is essential to Army operations, installation support and industrial processes. Increasingly, the availability of this resource is threatened by pollution, overuse and conflicting demands.

While this is true throughout the world, it is particularly true in the Western United States.

Congress passed the Energy Policy Act of 2005 mandating that all federal facilities achieve a 30 percent reduction in energy use by 2011, with 2006 as the baseline. The Installation Water Resources Analysis and Planning System, developed in 1991 by the U.S. Army Corps of Engineers as a result of an Army Science Board investigation, seemed admirably suited to addressing this task with regards to water use.

The assistant secretary of the Army for research, development and acquisition, in February 1987, charged the Army Science Board with addressing:

- water rights and legal policy,
- water-supply planning,
- water-resources management and conservation at installations,
- institutional impediments to establishing policy and promoting information and technology transfer, and
- needed research and development efforts.

The board, after visiting eight Army installations and the Corps' Waterways Experiment Station in Vicksburg, Miss., found that "model studies" should "be undertaken for water-short installations to illustrate an assessment of water sources, capacities of facilities and projected needs under various scenarios," including mobilization and conversation.

IWRAPS was tested during its development at various installations in litigation over their water rights.



Paul Landgraff
Photo by Mary Beth Thompson

The model proved effective at forecasting installation water needs up to 100 years into the future with approximately a 95 percent confidence level under all normal, conservation, and mobilization scenarios. The courts upheld these forecasts.

IWRAPS' forecasts do not rely on per-capita use. The per-capita use method can account for only about 50 percent of the observed variance in installation water use. Nor do the forecasts rely on gallons of water used per square foot, a method that has been shown to account for only about 85 percent of the observed variance.

The forecasts, instead, relate water use to building types and sizes as surrogate variables for the installation's mission and population. This relationship accounts for the dynamics of the intensity of use occurring in various types of facilities over time.

IWRAPS, which has now been upgraded for a Windows environment using Microsoft Access as the development platform, puts this data together with factors indicating the percentage of the installation that has been "improved" with man-made facilities; installation construction and demolition plans; and seasonality, climate and weather-related variables.

Within the past year, the deputy assistant secretary of the Army for environment, safety and occupational health was given a charge to create a viable, installation water-supply prediction model for the Army. DASA-ESOH, along with the Corps' Construction Engineering Research Laboratory, agreed to use IWRAPS as the starting point for their investigations.

Payoffs associated with not starting from square one to develop a water-supply prediction model are:

- Allocating fewer dollars to the investigations leading to this updated model;
- Taking advantage sooner of a provision in EPAct 05 which allows amounts appropriated for water conservation, assuming some action is actually taken, to be retained for future investment in other energy-saving projects;
- Contributing sooner to quality-of-life improvements for Soldiers and their Families by lowering costs;
- Allowing the installation, at the earliest possible date, to add more value to its local community by using as little of that community's water resources as possible while continuing to support the community with an identical employment base.

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Acronyms and Abbreviations	
DASA-ESOH	Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health
EPAct 05	Energy Policy Act of 2005
IWRAPS	Installation Water Resources Analysis and Planning System



Over your head: Replace lighting to reduce energy use, save money

by Debra Valine

At Letterkenny Army Depot near Chambersburg, Penn., a 2004 project replaced lighting and ballasts in a number of buildings, including the cafeteria, post exchange, warehouses where they refurbish equipment, and some storage and office facilities. The initial \$815,553 investment by the contractor, NORESKO Inc., of California, has yielded an annual savings of \$104,546 and 5,918 British thermal units per year.

Saving energy at Army garrisons and helping the Army meet energy goals can be as simple as replacing outdated light fixtures with newer energy efficient fixtures. One program that helps Army garrisons like Letterkenny meet mandated energy campaign goals is the Energy Savings Performance Contracting Program managed by the U.S. Army Engineering and Support Center, Huntsville.

The Army Energy Campaign's goals for 2030 are: eliminate energy waste in existing facilities; increase energy efficiency in new construction and renovations; reduce dependence on fossil fuels; conserve water resources; and improve energy security.

"ESPCs help garrisons meet their mandated energy goals," said Paul Volkman, the Installation Management Command's Energy and Utilities Program manager. "I would say that it will be extremely difficult for the Army to obtain the federally mandated goals of Executive Order 13423 to reduce energy 3 percent per year, or 30 percent by 2016, under the current funding situation without maximizing the use of alternative financing, such as ESPCs.

"ESPCs are a great tool for obtaining the necessary financing to immediately undertake needed energy efficiency improvements to facilities," Volkman continued, "and can have the additional benefits of reducing operations and maintenance costs, improving the employee's working environment and enhancing productivity."

Under ESPCs, contractors provide the financing and perform energy-related infrastructure improvements, and the gov-



Frank Reimfelder, an electrician in the Utilities Branch, Directorate of Public Works, Letterkenny Army Depot, Pa., replaces light bulbs in one of the new fixtures installed using the Energy Savings Performance Contracting Program. Photo by Don Bitner

ernment repays the contractors from the resultant cost savings over a period of 10 to 25 years. From 1998 to date, Huntsville Center has awarded ESPC contracts that have resulted in \$420 million in contractor-financed infrastructure improvements on Army garrisons and a total projected cost savings to the government of \$100 million.

"The lighting fixtures at Letterkenny were 10-20 years old and they used a lot more energy than the newer technology," said Amber Martin, a Huntsville Center project manager. "Technology has changed a lot in that period of time."

There were many different types of fixtures, Martin said. One of the good things about the project was that a lot of the replacement fixtures were made the same, making them easier to maintain. Each building required a different type of lighting and that determined the type of fixture, she said.

"Replacing light fixtures is a big part of ESPC," Martin said. "You can put them in, and it doesn't take a lot of time to install. The payment period to the contractor can be 10-15 years. For example, I spend \$1,000 a month on my energy bill for my building. The contractor renovates, and he can save me \$300 a month on the energy bill. If it takes me 10-15 years to pay him

back, I am paying for it with savings, so it's not increasing my operations budget."

Letterkenny provided the money to start the project, and according to Jim Coccagna, the chief of the Engineering and Planning Division with Letterkenny's Directorate of Public Works, it was money well spent.

"When you look at the annual savings and look at our ESPC payment to the contractor, we are looking at a net savings of about \$9,000 a year," Coccagna said. "Our payment to the contractor is \$96,000 a year, but our energy savings are \$105,000. It doesn't look like much, but with the cost of energy today, it gives us a positive cash flow.

A challenge during the project was that the fixtures were being replaced in mission facilities where lighting was essential, Coccagna said. Lighting requirements could not be compromised, but through careful selection and placement of the fixtures, they were able to keep the same amount of light and still save money.

"We are helping meet the mandated energy savings by not spending more money to pay for energy," Martin said. "The presidential mandate was to save the Army energy. It didn't have anything to do with saving money. ESPC saves energy without adding any additional cost to the government. Some energy projects can save energy but they will increase your operating budget. This program found the smart balance between doing the right thing energy-wise while not increasing the cost to the government."

For more information on ESPC, visit the web site <http://www.bnd.usace.army.mil/pao/FactSheetsFY07/Energy%20April07.pdf> or call 256-895-1417.

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Acronyms and Abbreviations	
ESPC	Energy Savings Performance Contracting



Fort Benning by the numbers

by Carroll Webb, David Miller, Kirk Ticknor and Larry Baca

What do you do when you have to create mailing addresses for an entire post? Fort Benning, Ga., took on that challenge when the U.S. Postal Service notified it in May 2005 that street addresses would be required in the future for mail delivery. Fort Benning was also planning an emergency 911 service that would require street addresses. The Directorate of Public Works and contractor Shaw Infrastructure, Inc. were tasked to assign addresses to all of the buildings on post and distribute that information.

Historically, no street addresses existed at Fort Benning. Like most military installations, the fort uses a numbering system to identify buildings. All enclosed buildings have a one- to four-digit number, and structures such as sheds or utility pits have an alphanumeric designation. The Real Property Division of DPW maintains the building inventory and numbers.

The buildings were sequentially numbered as they were built, making it difficult for newcomers to locate buildings. For example, Building 4, Infantry Hall, is situated about two miles from Building 5, the Judge Advocate General offices. With about 1,300 buildings on its 181,000 acres, Fort Benning is covered with dozens of similar building number inconsistencies.

The DPW and Shaw developed a system to assign addresses. They developed guidelines and a database to store addresses. Initially, a grid system with vertical and horizontal numbering was overlaid on a map of Fort Benning. The 5,000 foot by 6,000 foot grids yielded a systematic way to begin address numbering at road intersections.

The road maps were then subdivided into 25 foot intervals to yield the final address digits. The familiar even or odd numbering scheme by street side was used. For example, two buildings in the 8000 grid that are 25 feet apart on the same side of the road would be addressed 8002 and 8004, or 8001 and 8003. In this way, the address of each building along a street



Refurbished building sign at Fort Benning, Ga., now includes the street address. Photo by Kirk Ticknor.

increased by an increment of two digits for each 25 feet along the street centerline,

As the work progressed, the team discovered that there were many buildings on post that were not shown on available maps. New buildings had been constructed and modular buildings set up without having been included on any map. The scope of work was revised to include these buildings, locate them on the post map and assign addresses to them.

This effort included adding the buildings to the database with a macro incorporated into a digitized post map for instant location of buildings. Buildings not on maps and buildings originally located using aerial photographs were situated with a Global Positioning System and surveyed into correct position. Map printing is accomplished using a Computer-Aided Design program.


About 1,300 street addresses have been assigned to buildings and facilities at Fort Benning. The sign shop has added an address line at the bottom of about 500 signs to date. To minimize costs, buildings that would not normally require mail delivery or need to be located by the general populace were not provided with address signs.

The addressing project has made it much easier to locate buildings on the post. Exact street addresses are readily available to improve mail delivery. An added benefit is that faded building signs were renovated so that they became much more visible at night and presented a more professional appearance during daylight hours.

The work is nearly complete. Only a few outlying buildings on ranges are left to locate and add to the mapping and address database.

As the work progressed, addresses have been distributed to the Directorate of Information Management, the Directorate of Emergency Services, the 911 Service Center and the U.S. Postal Service.

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Fort Hood artillery battalion fires right on environmental compliance target

by Christine Luciano

One of the organizations that has set high standards at Fort Hood, Texas, is the 1st Battalion, 1-21 Field Artillery Regiment, 41st Fires Brigade. When the regiment first arrived at Fort Hood in 2005, it did not have an environmental program in place. In less than eight months, the regiment went from no program to implementing an effective Environmental Management System and scored 100 percent on its first formal environmental assessment.

How did they accomplish that feat? To get started, the regiment contacted its Environmental Compliance Assessment Team member, T.C. Coffman. Coffman worked with the 1-21 FA Regt. Soldiers and commanders to integrate ECAT's checklist into the battalion's internal auditing system, incorporate environmental procedures into their daily activities and keep leadership informed of the challenges specific to their unit and the installation.

"The basis of success in anything is leadership involvement," said Lt. Col. Paul Hossenlopp, former commander of 1-21 FA Regt. "An effective EMS will continue as long as there is leadership involvement and commitment from the battalion commander and battalion sergeant major down to the junior Soldiers new to the unit."

"From the beginning, the leadership's intent was to perform to high standards not only in the environmental realm but also in every aspect of their operations," Coffman said.

The battalion's first step to success was establishing a training program to educate its Soldiers and establish routine habits. The leadership used every opportunity to put out environmental information at monthly and quarterly training events and weekly at formation.

"Education is the number one thing," said Command Sgt. Maj. Kelvin Hughes, former command sergeant major of 1-21 FA Regt. "If we, as the leaders, do not make Soldiers aware of how important EMS and environmental compliance are, then what

are we here for? We, as the leaders, need to implement change in our organization."

With an effective program in place, the regiment instilled good environmental habits in every Soldier in its command. When new Soldiers arrive each month, the leadership and Soldiers are involved in educating them about their environmental procedures.

The battalion also identified different environmental sections in the motor pool and assigned batteries (companies) to be responsible for specific areas like the wash rack; recycle containers; dumpsters; petroleum, oils, and lubricants shed; daily use pallets; and areas around the motor pool. Ownership of an area gave the Soldiers a sense of pride. Commanders would conduct weekly EMS inspections on each area to ensure the standards were maintained. Soldiers would be present at the inspections to gain feedback from commanders on how well they did or how to improve.

"It takes a combination of command emphasis and involvement, instilling ownership and pride, and providing resources to your Soldiers," said Hossenlopp, "and the next thing you know, you have an effective environmental program."

Col. Richard Francey, brigade commander of the 41st Fires Brigade, explained that the key components to a successful EMS are leadership, purpose, direction and motivation.



T.C. Coffman, Fort Hood ECAT, talks with (left to right) Chief Warrant Officer Janie Reid, Sgt. 1st Class Juan Garcia, Sgt. 1st Class Robert Fielder and 2nd Lt. Nathan Piereman in front of a Used Product Reclamation Point, one of the designated environmental sections in the motor pool for which an assigned battery is responsible. Photo by Christine Luciano

"The leadership has to be involved in a cultural change within the organization, help Soldiers gain the education and embrace the environmental mindset," Francey said. "This is an investment in our environment, which is going to pay dividends so that we continue to have the resources and training lands over an enduring period."

The goal of the EMS is to help Soldiers and civilians identify environmental issues, procedures that are in place and how to improve tasks related to the environment. Fort Hood's continued success in EMS comes down to the Soldiers, like those in the 1-21 FA Regt., who incorporate environmental compliance into their daily activities and the ECAT that provides the Soldiers with knowledge and resources. ➤

Acronyms and Abbreviations	
ECAT	Environmental Compliance Assessment Team
EMS	Environmental Management System
FA	Field Artillery
Regt	Regiment



Speedy renewal project brings new life to Walter Reed clinic

by Debra Valine

On a temporary duty trip to Walter Reed Medical Center in Washington, D.C., Robert Mackey sat beside a wounded Soldier and his wife in the cafeteria. The Soldier had lost an arm and both legs, and his remaining arm was badly damaged. His wife was feeding him lunch. That experience brought home for Mackey the importance of the project he was working on for the hospital.

Mackey, a project manager with the U.S. Army Engineering and Support Center, Huntsville's Medical Repair and Renewal Program, was then in the midst of a whirlwind renovation project at Walter Reed's Clinic 1B. Clinic 1B is a warrior transition clinic, which treats Soldiers wounded in combat.

The clinic needed a quick renovation to meet the increasing number of patients. Walter Reed contacted Huntsville Center with the short-fuse project in July, asking if the needed work could be accomplished by Oct. 1.

"Back in July, our commander got a call from a colonel at Walter Reed," Mackey said. "We coordinated with Baltimore Dis-



Huntsville's Medical Repair and Renewal Program recently completed renovation of the Warrior Clinic 1B at Walter Reed Army Medical Center in Washington, D.C. Photo by Peter Fletcher, J&J Maintenance

trict to see if they wanted the project. Baltimore District was busy so we took it on," Mackey said. It was a Medical Repair and Renewal Program and Integrated Modular Medical Support System facelift project involving new floors, walls and furniture.

"Crystal Bennett Echols, the program

manager, and I traveled up to Walter Reed on July 23 to meet with Walter Reed officials and nail down the scope of work. We accomplished that and started work on Aug. 1," Mackey said.

Work on the project was completed Sept. 29.

"I am very pleased with the outstanding support the Huntsville team provided to this very important project," said Lt. Col. Mary Cunico, the officer in charge of the clinic. "We had several bumps in the road during the last few weeks of renovation, but nothing that we couldn't overcome together." ▶

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The ECAT helps Soldiers and civilians find solutions and achieve environmental success by ensuring its customers are informed on Fort Hood's environmental regulations and policies, and receive required training. Each ECAT member works individually, with command support, to increase leadership involvement and environmental awareness.

Semiannually, ECAT audits each organization's EMS. The organizations are scored on a 0-100 percentile scale and on a status of red, amber or green.

Some organizations are hesitant to use the ECAT, believing that ECAT will identify their shortcomings. They do not realize the role ECAT plays in assisting with compliance and EMS implementation.

"To be successful, I have to know my

organization and how it can be the very best," Francey said. "The two don't come together if I can't see everything. "If somebody from the Inspector General's Office decided to look at something, and they identified issues, should I be upset that they identified an area that can help my organization become better?"

"If you look at ECAT as being the enemy, then you are accepting lower standards across your organization," he said. "ECAT is an important resource that will help you succeed."

The 1-21 FA Regt. has scored 100 percent on their last two formal assessments and has set high benchmarks for the rest of the installation. The battalion is sharing its lessons learned and helping other organizations learn how to implement a successful EMS.

"Overall, the key to success is leadership

commitment, keeping everyone involved in the mission and maintaining a working relationship with the Environmental Division," Coffman said.

EMS enables Soldiers and civilians to recognize that they have an impact on the environment and that they are empowered to do something about it. The installation's leadership has taken a very proactive approach to implementing its EMS while stressing performance beyond compliance and incorporating the Army's Strategy for the Environment — Sustain the Mission, Secure the Future.

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U.S. Army Garrison Humphreys transforms to meet expected quadruple population growth

by Andre D. Butler

U.S. Army Garrison Humphreys in the Republic of Korea is undergoing one of the largest transformations in the history of the Army. It's also well on the way to becoming the Army's premier place to live, work and play, said Brig. Gen. Al Aycock, commanding general of Installation Management Command, Korea Region.

For years, Camp Humphreys was known as a very quiet and small post. With the decision to relocate all of U.S. Forces Korea south of Seoul, that image is rapidly changing. By 2012, Camp Humphreys will be the new home of USFK.

Located in Pyeongtaek, Korea, about 55 miles south of Seoul, USAG Humphreys is home to the 2nd Combat Aviation Brigade of the 2nd Infantry Division, military intelligence units and several other organizations. The current population of fewer than 10,000 — about 3,500 are Soldiers, the rest civilian employees, Family members and contractors — will grow to more than 44,000 by the time transformation is complete in 2012.

The 2012 population will include 17,000 service members and 13,000 Family members. The garrison will also see a substantial increase in the number of Army civilians, Korean national employees and contractors.

Relocation plan comes to life

The plan to realign U.S. forces in Korea and transform USAG Humphreys has been in the works since 2002, according to Fred Davis, program manager for the Army Relocation office at USAG Humphreys.



The new extension to the Humphreys Lodge will double the number of rooms in the facility and include conference space and other amenities to support a variety of training, temporary duty and recreational needs. Photos by Edward Johnson

“We are accruing 2,320 acres from the Korean government,” Davis said. “And now we are in the process of implementing construction plans needed for the upgrade.”

The expansion is all part of the Yongsan Relocation and Land Partnership Plan. It outlines the broad directions, goals and objectives to accomplish the transformation of USAG Humphreys and other locations to meet the stationing requirements for USFK. The plan encompasses a comprehensive facilities requirement for the relo-

cation of units and missions from the Seoul area and the region north of the Han River to Humphreys.

Gen. B.B. Bell, USFK commanding general, explained the coming transformation and the challenges the command faces. ➤

Acronyms and Abbreviations

ROK	Republic of Korea
USAG	U.S. Army Garrison
USFK	U.S. Forces Korea

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“It was a good project; a hard project,” Mackey said. “But it highlighted the strength of the Huntsville Center: when no one else can do the job, we will find a way to get it done.”

The timeframe was very short, and Mackey had to handle customer expectations aggressively.

“We had to make sure data drops were correctly placed and that furniture was where it needed to be,” he said.

“Even though it was August to September, and we were busy, seeing that we were able to help the wounded Soldiers and know we were helping make a difference made the project all the more worthwhile,” Mackey said, thinking back to the day in the cafeteria.

“I couldn't leave that day without thanking that Soldier for his service.”

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Debra Valine is the deputy chief of Public Affairs, Engineering and Support Center, Huntsville, Ala.





Construction has already started on newly acquired land adjacent to Camp Humphreys. Before engineers can build on the former rice paddies they must first drain them of water; conserve the topsoil, seal the surface with a porous barrier and raise the ground with fill material.

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“To support the realignment of U.S. forces, the Republic of Korea has committed significant resources to acquiring land for the relocation of our current Yongsan Garrison in Seoul and the 2nd Infantry Division north of Seoul under the Land Partnership Plan,” Bell said. “This has not been politically easy, and the efforts of the ROK government and Ministry of National Defense deserve recognition.”

The U.S. will return 59 vacated camps, along with all their facilities, buildings and land to the Korean government, while USFK consolidates into two main hubs south of Seoul, said Bell.

“Thus far, 30 camps have been returned,” he said. “After consolidating and transforming, our forces will be in a much better position to support ROK defense and U.S. national interests.”

Normalization of tours

The USAG Humphreys Real Property Master Plan is another intricate part of the transformation. It is the “blueprint” that outlines the land, buildings and facilities required to support relocated missions.

The master plan coincides with Bell’s goal of “normalizing” tours of duty in Korea. His vision is to provide stable tours for married and single service members and world-class support facilities to make the tours personally and professionally rewarding. This goal will be achieved by constructing state-of-the-art Family housing and support facilities.

The new facilities will allow Humphreys to burnish its reputation as a community of excellence, staffed with committed professionals, who provide for the diverse needs of service members stationed in Korea.

Camp Humphreys is well on its way to becoming one of the Army’s premier centers of readiness and support, according to Aycock.

“It is paramount that we provide the best support possible for our Soldiers and their Families,” Aycock said. “They deserve it, and we are committed to making this a world-class installation — master planned from start to finish with Soldiers and Families in mind.”

Building up, not out

A key aspect of the master plan is making the most of the existing and newly acquired land to support the expected population growth.

Although Humphreys is growing in physical size — from the current 1,200 acres to 3,500 by 2012 — the total land area, even with the new land transferred by the Korean government, will not support a massive sprawl of buildings like a continental-U.S. post. Consequently, the philosophy is to “build up instead of out.” Family housing units, barracks and many of the other new facilities on post will be multi-story buildings.

This philosophy is not new, according to Paul Cramer, IMCOM-Korea Public Works Division chief.

“By embracing local construction methods common to Korea, including high-rise structures and underground parking, we are optimizing land space in order to conserve our natural resources, an effort that is in direct support of our cooperative alliance with the Republic of Korea,” Cramer said

And so, a new, modern military installation will rise on land where rice has been grown for generations.

“What we are doing is creating a new city from the ground up,” said Davis. “It’s not everyday that you are charged with a project of this magnitude. So our goal is to build a model Army community that will be unlike any other the military has seen. This project is an estimated \$8.25 billion deal — larger than any project that’s on the table in the states today.”

Barracks, vehicle maintenance and company operations complexes are being built. The complexes will include Soldier barracks, dining facilities and recreational centers — all within walking distance from the Soldiers’ new worksites. Six new state-of-the-art gyms are also being constructed throughout the installation.

Three elementary schools, one middle school and one high school are scheduled to be built. The schools will be within the community in which Families live. This location will make it safer and more convenient for students to attend.

One facility that is already open for business is the new aquatics park. Dubbed “Splish & Splash,” the park opened Memorial Day weekend. It is the first, and to this date the only, of its kind open to service members, civilian employees and Family members throughout the Korean peninsula. The park was designed by IMCOM-Korea to provide all of the excitement, safety and Family fun of popular water parks in the states and is one of the new facilities geared toward making life more enjoyable at Camp Humphreys. ➤



An Army Family member points out his favorite slide at the Camp Humphreys’ Splish & Splash water park, one of the newly constructed facilities that are helping to make Korea an “assignment of choice.”



Yuma Proving Ground study looks at wildlife, developed waters

by Randy English and Steve Rosenstock

Water is believed to be a limiting factor for certain desert animals, particularly game species like mule deer and desert bighorn sheep. Over the past several decades, western state and federal agencies have committed extensive resources to the installation and maintenance of developed water sources for wildlife. Until recently, these developed waters were considered beneficial to game and nongame species, though this was based largely on anecdotal evidence.

Critics of wildlife water developments have postulated that they mainly benefit game species and could be harmful to wildlife in general; the potential role of developed waters in increased predation at or near the water, poor water quality, disease transmission and drowning risk have been key concerns.

Study begins

In 1999, Yuma Proving Ground, the Arizona Game and Fish Department and

the U.S. Fish and Wildlife Service Kofa National Wildlife Refuge initiated a multi-year collaborative effort to investigate the ecological effects of water developments on wildlife in southwestern Arizona. The work is ongoing and is being conducted on YPG, KNWR and adjoining Bureau of Land Management lands.

Past studies evaluated use of developed waters through limited, direct observation, use of still cameras or by examination of animal sign. Using remote video cameras equipped with infrared illuminators, officials were able to get a more detailed look at wildlife use of these waters, both day and night, through all seasons for more than three years.

In all, officials collected nearly 38,000



A biologist samples water quality at wildlife water catchment on Yuma Proving Ground, Ariz. Photo courtesy of Yuma Proving Ground

hours of video footage and uncovered some interesting results. Twenty-nine species were recorded, including kit fox, a species thought not to need free-standing water

The most common larger visitors ▶

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The master plan also calls for construction of an 18-hole golf course and jogging, biking and walking trails.

Not your father's Korea

As the master plan took shape, officials who briefed the plan often said that the post would become unrecognizable to the Soldiers who served one-year tours in Korea in the past.

"This will not be your father's Korea," said Col. Michael J. Taliento Jr., the former USAG Humphreys commander who oversaw the beginning of significant change on the installation. "All of the Quonset huts that we used to put our Soldiers in will be gone."

The Quonsets — corrugated metal buildings that became an unofficial signature of the Army in Korea — have been replaced by gleaming high-rise facilities that house Families and service members

in comfort.

"Quality of life here will flourish," said Bart Mirabal, Humphreys' director of Public Works. "A new child development center is already underway. We are building more chapels for the expected population and open fields for Families to enjoy however they please."

USAG Humphreys will build a new commissary and post exchange shopping complex as well as a food, beverage and entertainment center. And, the existing downtown shopping area is getting a face lift, Mirabal said.

"There will also be smaller shopping centers within the individual housing communities," he said. "We are creating a very Family-friendly environment."

Col. John E. Dumoulin Jr., USAG Humphreys commander, went further.

"We are taking what used to be a single-Soldier post and transforming it into

a Family- and pedestrian-friendly community," Dumoulin said. "Soldiers will be able to walk to work instead of having to travel across post; kids will be able to walk from their homes to school; Humphreys will become the 'assignment of choice' for Soldiers and civilians."

But, one thing that will not change with the Humphreys transformation is the garrison's guiding philosophy.

"We will continue to provide world-class customer service for our Soldiers, Families, civilians and retirees," Dumoulin said.

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were mule deer, turkey vultures, coyotes, great-horned owls, gray foxes, bobcats, western screech owls, elf owls and red-tailed hawks.

Coinciding with highest temperature and lowest relative humidity, May, June, and July were the peak visitation months for deer, mammalian predators, raptors and avian scavengers.

Predation and water quality

Little evidence was found that developed waters acted as predation traps as some critics have suggested. In fact, only eight successful or attempted predation events were observed.

To the human eye, developed waters can appear unfit for drinking. This observation has led some to believe that these waters may be harmful to wildlife.

Officials analyzed hundreds of water samples for chemical composition, heavy metals and toxins that can be produced by blooms of blue-green algae. Since water quality standards have not been developed for wildlife, guidelines developed for domestic livestock, swine and poultry were used.

Nearly all samples fell well within recommended guidelines. A few samples had slightly elevated fluoride or alkalinity, neither of which was likely to affect animal health. Toxins associated with blue-green algae were absent. This study indicates that water at these developed sources is of sufficient quality for consumption by wildlife.

Wildlife diseases

Because wildlife water developments are visited by large numbers of doves and songbirds, it was suggested that they could facilitate the spread of trichomoniasis, a disease that can kill large numbers of birds during severe outbreaks.

Over a three-year period, numerous water samples were collected from different types of water developments in the study area, as well as from water developments in the Kingman, Ariz., area during a 2003 trichomoniasis outbreak. Water samples were cultured in the laboratory and then inspected for the protozoan.

To the surprise of everyone involved, all samples were negative, including those from the Kingman area.

One of the collaborating scientists at the University of Arizona found a possible explanation. Much like natural water sources, water developments are home to a rich community of microorganisms, many of which are predators that may be consuming the *Trichomonas* protozoans.

The hemorrhagic diseases bluetongue and epizootic hemorrhagic disease, are important diseases for mule deer, bighorn sheep and other ungulates, and are spread by biting midges in the genus *Culicoides*.

Because larval midges develop in saturated sand or soil, it has been suggested that developed waters act as larval development sites facilitating the spread of these diseases among ungulates. Adult midges were collected near developments, as well as larvae, if any, from saturated substrate samples. Midges were identified to species and the females tested for BTV and EHDV. Tests for both diseases in the known vector, *C. sonorensis*, were negative.

In general, soil conditions at developed waters were not conducive to larval development.

Drowning

Writings about the Southwest contain occasional references to animals that become entrapped and drown when attempting to get water. This has led some to speculate that wildlife water developments represent a similar hazard.

During four years of research, YPG and officials from other agencies visited water developments more than 600 times, examining the water and surrounding area for drowned animals or animal remains. They were found on only 19 occasions. While the causes of death are unknown, observations from video cameras suggest that predators or scavengers may have brought some of these animals in from elsewhere.

Given the small number of mortalities, officials concluded that these water developments do not pose a significant entrapment or drowning risk to wildlife.

Collaborative efforts

The collaborative team and colleagues at other agencies and universities continue to study wildlife waters. Current efforts focus on understanding how bats use different water trough designs and estimating relative amounts of water that desert mule deer obtain from developed waters versus forage plants and other undeveloped water sources.


Collaborative efforts such as these help military land managers and managers within the Department of Defense's partner agencies make informed decisions, while using the best available science on an ecosystem scale, to sustain the environment for the military mission and be good stewards of the nation's natural resources.

Benjamin Franklin once said, "We will only know the worth of water once the well is dry." The same might be said for man-made water sources in the desert Southwest.

Water developments are integral to wildlife management in this region and will be of even greater importance if natural water sources are further compromised by human development and climate change.

For a more detailed look at this study, refer to Wildlife Society Bulletin 34(3):582-591, 2006, and Rosenstock, et al. "Studies of wildlife water developments in southwestern Arizona: wildlife use, water quality, wildlife diseases, wildlife mortalities, and influence on native pollinators, 2004," and the Arizona Game and Fish Department's Research Branch Technical Guidance Bulletin 8.

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Randy English is a wildlife biologist at Yuma Proving Ground, Ariz. Steve Rosenstock is lead research biologist, Arizona Game and Fish Department Research Branch. 

Acronyms and Abbreviations	
BTV	bluetongue (disease)
EHDV	epizootic hemorrhagic disease
KNWR	Kofa National Wildlife Refuge
YPG	Yuma Proving Ground



Fort Sam Houston renovations ease daily living for wounded warriors

by Cheryl Harrison

On a daily basis, the majority of Americans wash their face and hands, take a shower or bath, and reach up to choose an outfit from the closet — all normal activities usually accomplished without a second thought. Another group of Americans, which includes wounded warriors, has the same routine, yet it is not accomplished without forethought, planning and execution.

At Okubo Barracks, near Brooke Army Medical Center at Fort Sam Houston, Texas, renovations have been under way to make navigation and daily routines easier to accomplish for wounded service members.

“With far more wounded Soldiers than anticipated, renovations needed to be accomplished,” said Jack Hagans of the Directorate of Public Works. “Two of the seven wings are finished where we have taken two-person rooms and converted them into rooms for one.”

The original rooms had two small bedrooms, a common area and a full bath. The rooms were small with sharp corners and angles difficult for wheelchairs to maneuver around. They were also dark and cold in appearance.

Some of the rooms on the first floor of Okubo Barracks have been renovated to one-person rooms with a living area, bedroom and wheelchair-accessible bath. Tubs were removed and tiled roll-in showers were installed with handicapped rails. Sinks were lowered for easier reach, and they were left open beneath to allow room for knees and wheels.

Closets were given lower rods for hanging clothing and lower shelving for storage. The upgrades included thresholds with ramps that ease rolling wheels’ entry into the rooms.

The seven-wing barracks is being rebuilt for warriors in transition. Even though it is a part of the hospital, the atmosphere

around Okubo is that of apartment living. A few differences are evident: all floors are tiled, the laundry has washers and dryers that are lower than the norm; the entrances are wider; and, in some instances, a key is not required. Burn victims, for example, need only swipe a pass key, and the door will automatically open. But Okubo provides a home-away-from-home environment.

Behind the doors of a first-floor unit is the temporary home of Pfc. Terrance McBride, a wounded warrior. The living room is an open, light-filled and cozy place he can call his own during healing and rehabilitation. His apartment displays family photos, personal items and even a recliner that he enjoys while watching television.

McBride was injured during a training incident while downrange. Both of his hips and legs were crushed and the right leg broken so severely that amputation below the knee was his only hope of walking again.

McBride said he was comfortable in his renovated room.

“I can’t complain at all,” he said. “A lot of people fix it to their liking. I bought myself a recliner from the PX [post exchange]. One guy I know has a futon sofa in his room.

“For future renovations, recliners are on the list,” said Rob “Robbie” Robinson, Okubo Barracks facility manager. “I also recommended lighter wall colors rather than the issued gray. It gives a better feel, and all new furniture is being planned.”


The U.S. Army Corps of Engineers’ Fort Worth District has renovated 36



Before renovations, the bath held a regular bathtub. With the changes, wheelchairs can easily roll into the shower allowing a measure of safety and normalcy for wounded warriors. Photo courtesy of Fort Sam Houston, Texas, Public Information Office

rooms. In the near future, Fort Worth District will award a construction contract to replicate the current handicap-friendly design to the first floors of other wings, which will add 28 more rooms. The project is scheduled for completion in the third quarter of fiscal year 2008.

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Presidio of Monterey stresses recycling as landfills decrease

by Elizabeth D'Angelo

U.S. residents, businesses and institutions produced more than 245 million tons of waste in 2005, according to the Environmental Protection Agency. That amounts to about 4.5 pounds of waste per person per day. This large quantity of trash poses a problem because the number of landfills in the United States has been steadily decreasing — from 8,000 in 1988 to 1,654 in 2005.

To be good stewards of the environment, environmentalists at the Presidio of Monterey, Calif., are encouraging Presidio and Ord Military Community members to take part in the installation's recycling program.

"Our focus for the last couple of months has been on recycling because the state of California has a 50 percent waste diversion requirement that the cities must meet," said Johanna Turner, environmental protection specialist at the Directorate of Public Works, Environmental Division.

Turner is also the Presidio's management representative for the Environmental Management System, a system based on International Standards Organization 14001. The EMS, mandated for the Department of Defense, sets standards for how the installation manages and tracks environmental issues. Part of the EMS includes a program for dealing with solid waste.

Turner pointed out that Executive Order 13423 gives specific goals for reduction and diversion of solid waste from landfills and that includes a recycling program.

Other objectives of the executive order include those related to water consumption, energy, paper consumption, management of hazardous materials, energy use and green procurement guidelines, which involve buying recycled items.

The command's policy on recycling and waste management mandates that all military and DoD civilian personnel recycle in order to meet the state-required goal of recycling 50 percent of the refuse generated

on the installation.

Items that may be recycled include plastic containers, aluminum and tin cans, glass bottles, beverage containers, newspapers and inserts, magazines and catalogs, electronic waste and cardboard.

"We're lucky here in Monterey County in that we don't have to specifically segregate all of our recycling," said Turner. "In a lot of places, you have to separate bottles, cans and paper, but here it's all done at the recycling facility."

Not requiring separation of recyclables should make recycling easier for consumers, but Turner said there is still a difficulty with the recycling containers.

"One of our biggest problems is that we have dedicated recycling containers, and often they get contaminated with garbage," Turner said. "All that recyclable material ends up in the landfill rather than going to recycling."

A lot is gained by disposing of trash and recyclables separately. For example, recycling a ton of clear plastic bottles saves 7.4 cubic yards in landfills, according to the California Refund Value Program.

Another recycling program at the Presidio involves electronic waste, a new program for California. Electronic waste includes common batteries and computer equipment. Collection areas for batteries only are located around post.

"They (electronic waste items) can be very hazardous to our landfills because they have heavy metals in them that can bleed



Containers such as this one at the Presidio's Price Fitness Center are for recyclable items only. Photo by Elizabeth D'Angelo

into ground water," Turner said

The Presidio has a third recycling program that deals with hazardous waste. Hazardous waste can be turned in at the hazardous waste facility. Waste oil from vehicles can be taken to Army and Air Force Exchange Service, along with car batteries and antifreeze.

"When we recycle, we're reusing products that have already been manufactured," Turner said. "We're saving room in our landfills, we're avoiding pollution, and we're saving precious natural resources like wood, metals and things that can be reused."

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Acronyms and Abbreviations

EMS	Environmental Management System
DoD	Department of Defense



Working magic at Fort Hood: a smarter way to manage service orders

by Shawn Garris and Christine Luciano

The Fort Hood, Texas, Directorate of Public Works Maintenance Division has increased service quality and efficiency with a web-based application called the Work Management Center that manages the service order process.

The WMC is a custom solution developed by Intergraph Corporation that brings together the Integrated Facilities Systems and Supply 2000 into one management view. The system enhances responsibility and improves performance by assigning service orders to maintenance technicians, balances the workload and increases the number of service orders completed.

The WMC system was initially implemented in one of the general maintenance area shops Feb. 1. After successful tests, the other two area shops were brought online April 1. Since implementation, the overdue service orders have dropped an average of 56 percent, while the number of days to complete a service order has dropped about 34 percent. During the same time frame the prior year, the overdue service orders increased 6 percent.

The WMC manages service orders by automatically assigning work to maintenance technicians based on the trade needed — plumber, electrician, etc. — and the facility. The WMC also allows the shop foreman to view each maintenance technicians' workload and reassign work as needed to evenly distribute the load.

The system generates assignment sheets that replaced the standard Labor and Equipment forms. The assignment sheets list the service orders based on their overdue dates and groups the service orders by facilities to reduce travel time. The maintenance technicians use the assignment sheets to track time spent and equipment used, and to collect their customers' signatures.

At the end of the day, the maintenance technicians turn in the assignment sheets for input into the WMC. When the data-entry person selects the worker's name, the work for the day is already populated. The new data entered is the number of hours, the task code and equipment identification. This change reduces the amount of time to process

the standard L&Es and increases the accuracy of the information being inputted.

The shop foreman and the Supply Branch can use the supply-tracking portion of the application to monitor the status of service orders needing supplies. The supply status reports display information that helps the shop foreman identify parts that have been ordered and received, and the service orders completed. Another screen provides the supply view, which displays the purchase order number, the product purchaser and requests that have or have not been ordered.

The user can also access detailed information about the main service order, a display of labor utilization and the supply information. The main service order information includes the work description, point of contact, priority and facility. The labor utilization screen shows the maintenance technician, the task code, the number of hours spent on the task and the date the work was completed. The supply information section displays the parts ordered, the parts' vendor, the buyer, the order date and the received date.

The system also has management reports used by the shop foreman and upper-level DPW management to view the "service-order health" for the organization. These reports include real-time service order workload summaries, backlog statistics, completion statistics and service-order life-cycle information.

The summary report displays, by shop or trade, the open service orders in each priority and the overdue service orders. The service-order statistics report shows starting and ending open service orders, number of service orders created, completed, cancelled and overdue during a specified time frame. The completion statistics report presents how many service orders were completed in priority and the time it took to complete them on average for each shop or each trade.

The service-order life-cycle report breaks down the timeline for service orders requiring supplies as well as all service orders. The



Gary Shuffler and Tommy Figueroa (left to right), DPW Maintenance Division, make adjustments to controls of the newly installed chiller. Photo by Virginia Sanders.

supply view details the average number of days — by priority, shop or trade — from the date the service order was created to the date the supplies were requested, the supply request to the supply order, the supply order to supply receipt and the supply receipt to the completed work. The overall view provides the dates from creation to first response and from first response to completion.

This application has allowed the Fort Hood DPW management a portal to view the service orders and the shop foremen to manage their service order workloads more easily. This system expands on the current functionality of IFS and also brings the Supply 2000 information into the WMC to make it easily accessible.

Future updates will allow shops to assign work to teams of maintenance technicians for service orders that have safety regulations that require at least two people on the job site.

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Shawn Garris is the project manager, Intergraph Corporation, and Christine Luciano is the environmental outreach coordinator, Directorate of Public Works, Fort Hood, Texas

Acronyms and Abbreviations

IFS	Integrated Facilities Systems
L&E	Labor and Equipment
WMC	Work Management Center



Meet your engineers — in their own words

compiled by Mary Beth Thompson

Don LaRocque

Title: Chief of Public Works, Installation Management Command, since 2003.

Education: Bachelor's degree, with honors, in electrical engineering from Lowell Technological Institute in Massachusetts and "a long string of job-related professional training in the 32 years I have been working for the Army."

Biggest current challenge: "Batting the D.C.



Don LaRocque

bureaucracy."

First thing he does when he gets to work: "Plug my laptop in its docking port and make a pot of coffee."

What he is doing to mentor young engineers and grow the career field: "We aggressively pursue getting career intern positions, filling those positions and then placing the interns in permanent positions once they have completed their internship."

Accomplishment of which he is especially proud: "'Pleased' or 'thankful' are better words than 'proud.' My accomplishments are only by the grace of God; I can't really take credit.

"The things that I'm most pleased about are the way engineers at all levels have risen to the challenge of planning, programming and executing facility support for mobilization, modularity, transformation, Base Realignment and Closure, Global Rebased, Active Component-Reserve Component rebalance, training load increases, Grow the Army, and, most recently, support for Warriors in Transition.

"After that, I particularly like the area development guides we have developed and are developing to ensure the facilities we are constructing actually look good when done."

Stephen Bonneau

Title: Chief, Public Works, IMCOM-West, since March.

Education: Bachelor's degree from the U.S. Military Academy; master's degree from the University of Southern California.

Biggest current challenge: "Planning ahead; daily tasks consume the work day."

First thing he does when he gets to work:

"Park my bag in a chair and take out the laptop, load it into the docking station and power up the PC. While it is booting, take the two cups to the sink to clean them, nuke some water for a hot cup of cappuccino mix and fill the other one with cold water from the drinking fountain. Return to the office to finish logging in. Scan to see what of the many unopened e-mail is the one I should start with. It is a remarkably same routine each morning."

Biggest changes that he has seen over the years: "1. Public Works being short on staffing so that the organization seems to be in the reaction mode to the daily crises.



Stephen Bonneau

2. Public Works being short on funding to maintain and repair the installation facilities in the manner that the installation tenants would expect for this nation's premier fighting Force. 3. So many problems revolve around the first two, I will stop here."

Accomplishment of which he is especially proud: "Serving my country — first as a Soldier and now as a civilian employee."

Added comment: "I look forward to facing the future challenges in building and maintaining Army installations of excellence."

Families and the civilian workforce have an expectation of the level of service they find acceptable. Within the public works services, we need to balance these expectations with available funding."

First thing he does when he gets to work:

"Check incoming messages. Answer inquiries and provide responses to higher headquarters. Synchronize daily activities."

What he is doing to mentor young engineers and grow the career field:

"Support the Army intern program. Encourage professional licensing. Informal talks on professional development and leadership."

Biggest changes that he has seen over the years:

"The activation of Installation Management Agency (Command). IMCOM is providing standardization in garrison operations. Focused funding on services for Soldiers, Families, civilian and contractor workforce that improve quality of performance."

Accomplishment of which he is especially proud:

"I value the accomplishments of the folks I am privileged to serve. Success is a team effort."

Paul D. Cramer

Title: Chief, Public Works, IMCOM-Korea, since June.

Education: Bachelor's degree in civil engineering; master's degree in engineering management.

Biggest current challenge: "Managing change in order to minimize disruption to workforce and supported people. Soldiers,



Paul D. Cramer





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Al Rasper

Title: Chief, Public Works, IMCOM-Europe, since 2004.

Education: Bachelor's degree in civil engineering from Virginia Military Institute, a distinguished military graduate; master's degree in management from Troy State University; attended the Army War College.



Al Rasper

Biggest current challenge: "Balancing requirements and resources during a period when the Army is at war and transforming."

Accomplishment of which he is especially proud: "Serving Soldiers and Families."

Added information: Rasper, a self-described "Army brat," retired as a colonel after 30 years with the U.S. Army. During his active duty career, he served in engineering posts around the world, including Germany, Honduras, Korea and various continental U.S. posts. His hobby is snow skiing.

Al Carroll

Title: Chief, Public Works, IMCOM-Pacific, since 2003.

Education: Bachelor's degree from the U.S. Military Academy; master's degree from the University Missouri, Rolla; Industrial College of the Armed Forces.



Al Carroll

Biggest current challenge: "Our largest challenges are: 1. renovating or building facilities to keep pace with changes in force structure caused by the modular force, BRAC and Grow the Force; 2. environmental site conditions; and 3. environmental litigation."

First thing he does when he gets to work: "Get a cup of coffee and read inspirational books and articles before jumping into work-related e-mails and taskers."

What he is doing to mentor young engineers and grow the career field: "I lead by walk-

ing around and always stay engaged at the personal level. Mentorship is only achieved by spending time face to face.

"Taking younger engineers TDY (on temporary duty trips) to watch and listen is also another method I like when time and budget permit."

Biggest changes that he has seen over the years: "I have seen a trend toward centralization, standardization and privatization."

Accomplishment of which he is especially proud: "I am especially proud of the great team that maintains and operates the Central Heat and Power Plant at Fort Wainwright [Alaska] running 24/7 in support of our Soldiers and Families."

Added comment: "Send more money."

Michael Frnka

Title: Chief, Public Works, IMCOM-Southeast, since 2003.

Education: Bachelor's and master's degrees in industrial engineering.



Michael Frnka

Biggest current challenge: "Relocatable buildings, which are sometimes the only facility solution to an immediate Army mission requirement but which are frowned upon by policy."

First thing he does when he gets to work: "Say 'Good morning' to as many people as I see and try to get answers to the problems that were not resolved the night before."

What he is doing to mentor young engineers and grow the career field: "Encouraging the installations to use the intern program and, at the region level, to use the recruitment process to try to build and grow the Public Works Division."

Biggest changes that he has seen over the years: "Becoming more businesslike, which can improve some operations but can impact our support to the Army, which is not a profit-oriented business."

Accomplishment of which he is especially proud: "Our office and team members won a 2003 Closing the Circle Award for an Installation Sustainability Program and then a Presidential Award for Federal Energy Management in 2005."

Added comment: "IMCOM has given us an opportunity to manage the BASOPS [Base Operations] of the Army from a global and corporate perspective. Although this has been a tough adjustment for the Army, the IMCOM workforce continues to maintain its focus and devotion toward the Army mission and the war — doing the extraordinary to support Soldiers and their Families."

Richard "Dick" Yates

Title: Chief, Public Works, IMCOM-Northeast, since June.

Education: Bachelor's degree in engineering; Sustaining Base Leadership and Management.



Richard "Dick" Yates


Biggest current challenge: "A complete master planning documentation for garrisons, especially those undergoing directed changes. Many are just parts and not the complete package, which is essential to accept the changes being introduced to the garrison and region."

First thing he does when he gets to work: "Get a cup of coffee; then e-mails from the boss."

What he is doing to mentor young engineers and grow the career field: "Ensure we have intern authorizations at our participating garrisons."

Biggest changes that he has seen over the years: "Reduction of the engineering staff in favor of contracting for services."

Accomplishment of which he is especially proud: "I would not provide any one specific action since all has been the result of a great team of people to work with over the years. It has been a joy to have been associated with great people to provide great facilities for the U.S. Soldiers, civilians and their Families to live, work and play."

Mary Beth Thompson is the managing editor of the Public Works Digest. 

Acronyms and Abbreviations	
BRAC	Base Realignment and Closure
D.C.	District of Columbia
IMCOM	Installation Management Command
PC	personal computer



Changes coming in civilian workforce development

by Lt. Gen. Robert L. Van Antwerp

During the Association of the United States Army Annual Meeting in Washington, D.C., in October, I participated in a lively panel discussion on civilian career management. The common thread through all of the panel members' presentations was that civilian career development is changing rapidly to meet the new needs of the Army and the Department of Defense.

My fellow panel members are in positions to know. They were all distinguished human resources leaders: Patricia Bradshaw, director of Civilian Personnel Policy, Office of the Secretary of Defense; Jim Warner, a retired brigadier general who is director of Civilian Development, Office of the Deputy Undersecretary of the Army; Dr. Susan Duncan, the current director of Human Resources, U.S. Army Corps of Engineers, and soon to be the director of Civilian Personnel Management, U.S. Army; and Jeanne Davis, the acting assistant for Civilian Personnel Policy who will soon become the director of Human Resources for USACE.

An expeditionary mindset for employees at all levels is one of the changes we discussed. More than 4,000 civilian employees have volunteered to support our uniformed team members in Iraq and Afghanistan. Hundreds of others have deployed in emergency response roles for natural disasters here in the United States. The changing



Lt. Gen. Robert L. Van Antwerp
Photo by F.T. Eyre

nature of conflicts that the Army must meet head-on, coupled with the growing need to partner with other interested parties — governmental and non-governmental organizations as well as the private sector — amplifies the need for civilian employees to gain the skills and stamina necessary to operate in the expeditionary environment.

I know that, for a number of reasons, some of you are unable to deploy. However, there are many opportunities to diversify your experience in your home office — backfilling for those employees who deploy, developmental assignments and others.

For example, Earl Groves recently served on a six-month assignment with the Command Staff Group at Corps Headquarters. His job back home is assistant chief of the Operations Division at Tulsa District. When he accepted the position with the CSG, he created opportunities for four employees to take on increased duties and responsibilities through a chain of temporary backfill assignments to keep the Operations Division running smoothly in his absence. Earl's willingness to "be on the edge," as I call it, and "energize" his workforce for future advancement is one instance of leveraging resources and creating opportunities that result in improving the Engineer TEAM.

The panel also discussed building diversity in job experiences, particularly with other agencies or in a joint command environment. Ms. Bradshaw said that in the near future, DoD will issue policy that will emphasize joint assignments as a deciding factor in making selections for senior civilian positions, including the Senior

Executive Service. The Army is embracing new partners to help accomplish its missions, and I encourage all employees to take advantage of opportunities to work for one of those partners. These opportunities can broaden your professional experience and provide a chance to recharge yourself through new perspectives and assignments.

One way to gain such opportunities is through participation in the Career Program 18 Leadership Development Program, which is managed through Headquarters USACE. Aimed at the GS-12 and 13 levels, the LDP provides each participant with three components of preparation: formal leadership and management training through the Army Civilian Education System and the Office of Personnel Management, a mentoring relationship with a senior Army leader and a six-month developmental assignment outside of his or her functional and geographic area. Since its inception in 1998, 140 careerists have completed the program and more than half of those graduates have received promotions and new assignments within the Army engineer TEAM.

I strongly urge all who are interested in expanding their horizons and skill sets to apply for the CP-18 LDP. Applications are due to my program manager, Ed Gauvreau, by Dec. 15. They are available at the CP-18 web site, <https://ekopowered.usace.army.mil/cp18/>. If you have any questions, please contact Ed at 202-761-0936 (DSN 763) or ed.gauvreau@us.army.mil.

As a final point, let me tell you about a friend I made at AUSA. Aaron Thomasy is a brand-new Army civilian employee who works with the Program Analysis and Evaluation team at the Pentagon. During our panel discussion, I gave Aaron an assignment to keep me and the other speakers within their time allotments. My process was simple and straightforward: select ➤

Acronyms and Abbreviations	
AUSA	Association of the United States Army
CSG	Command Staff Group
CP-18	Career Program 18
DoD	Department of Defense
LDP	Leadership Development Program
USACE	U.S. Army Corps of Engineers

Chief's TEAM acrostic (abridged)

Are you a teammate? Are you working to accomplish great things for the team's success? Do you respect your teammates and appreciate their talents?

T = Trust - honesty, reliability, transparency in communications; trust must be developed.

E = Excellence - committed to top performance, and sound science and business practices.

A = All about People - invest in people; accept, understand, recognize and appreciate others.

M = Motivation - invite people to a larger purpose, greater destiny; motivate towards a legacy.



Act now to get free slot in corrosion course

by Susan A. Drozd

A three-day course on water treatment for Department of Defense facilities will be held in New Orleans, La., March 12-14, just before the NACE International Corrosion 2008 meeting, March 16-20.

The course, sponsored by the DoD Corrosion Policy and Oversight Office, is designed for water facility engineers and technicians who work for DoD. It will provide guidance to help military installations be "smart users" of water treatment for new and existing heating and cooling, and potable water systems.

Tuition is free to DoD registrants, and the Engineer Research and Development Center (ERDC) will fund the travel costs for attendees from Army installations. There are only 31 seats available, so act now to secure a place.

Registration information is available from Susan Drozd, 217-373-6767, susan.a.drozd@us.army.mil.

Susan A. Drozd is a chemist, Paint Technology Center, ERDC's Construction Engineering Research Laboratory.

(continued from previous page)

him for the assignment, provide him with training (education), give him the chance to practice (experience) and then allow him to execute that knowledge and training (empowerment).

I ask all supervisors and managers to give our emerging leaders and employees on the Engineer TEAM the same chances to excel as I gave Aaron at the AUSA panel discussion, making the entire CP-18 TEAM Army Strong, Engineer Ready!

Essayons!

Lt. Gen. Robert L. Van Antwerp is chief of engineers, commanding general of the U.S. Army Corps of Engineers and functional chief of Career Program 18.

Senior fellows: Moving on up

The Army selected 19 civilians with the potential to serve in the Senior Executive Service for the inaugural class of Army senior fellows in September.

The Army Senior Fellows program is designed to echo the professional development the Army provides future general officers, by developing solid, proficient executives with skills that rival their military counterparts. Participants will study in a senior-service college and perform a developmental assignment in their organizations.

"The Army Senior Fellows program is unique," said Ray Horoho, ASF executive director. "Our program prepares interested Army civilians to be the Army's future senior executives. We will guard against simply replicating today's executive force. We intend to expose fellows to the best leaders in the Army, federal government and industry. Our goal is to help them to face the executive-leadership responsibilities of the 21st-century Army."

The program objectives include establishing and helping meet SES succession-planning goals based on the executive core qualifications requirements, creating and managing a talented Army Civilian corps and familiarizing the fellows with today's challenges while preparing them to handle tomorrow's.

Depending on their education and experience levels, fellows will spend up to 36 months in a combination of developmental assignments and courses selected to build branch-immaterial leadership skills. Those who have not attended a senior-service college will be given an opportunity to do so. Each developmental assignment will last from six months to a year.

Unlike other candidate programs, the ASF program cannot certify candidates in advance and place them into vacant senior-executive billets. After completing the program, participants must compete through regular merit promotion and be selected as members of the SES.

"The education and training path for the emerging executive previously required staying assigned to their existing position while in an academic environment, resulting in a manpower loss to the command," said Horoho. "Now, each phase of the training will include a permanent change of station, allowing organizations to have continuity of operations and allowing more flexibility for the employee to do career and educational planning."

Candidates must be general-schedule Army civilians in grades 14 and 15 or pay-band three employees under the National Security Personnel System who have demonstrated their abilities within executive core qualification areas. They must possess innovative problem-solving and planning capabilities and a passionate dedication to enhancing the health and well being of Soldiers, Army civilians and their Families.

"Through executive experience-based assignments and executive educational opportunities, these fellows will become experts in the business of running the Army," Horoho said. "They are the rising stars who will provide continuity of operations as current senior leaders conclude their careers."

Information and the application form for the ASF program are available at the Civilian Personnel Online web site, <http://cpol.army.mil>. Click on the ACTEDS training catalog. Applications for next year's program are due Jan. 18.

POC is Vern Carter, Training Management Branch, Training Management Office, Headquarters, U.S. Army, 703-325-2456 (DSN 221-2456), vern.carter@us.army.mil.

From an Army News Service release.

Acronyms and Abbreviations

ACTEDS	Army Civilian Training, Education and Development System
ASF	Army Senior Fellows
SES	Senior Executive Service



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<http://www.imcom.army.mil>