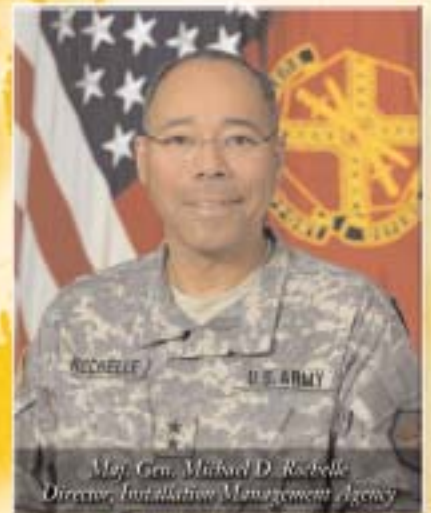


Public Works *Digest*

In this issue:

Annual Report Summaries





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As you may know, the regular editor of the *Public Works Digest*, Alexandra Stakhiv, recently retired. I am filling in as editor during the process of hiring a new one. As 2005 comes to a close, and we look back on what the Army Installation Management Team (i.e., the Installation Management Agency (IMA), the Office of the Assistant Chief of Staff for Installation Management (OACSIM) and the U.S. Army Corps of Engineers (USACE)) has done in support of the Army, the two word summary that comes to mind is "a lot."

This is the annual report issue of the Public Works Digest where organizations and installations are given a chance to provide a summary of the year's accomplishments in support of Army installations.

As the Army transforms into the new modular force made up of brigade combat teams, Army installations are faced with a shortage of facilities such as barracks, operations buildings, dining facilities and motor pools. IMA is using relocatable facilities to help meet the demand for needed facilities. From Fort Wainwright, Alaska, to Fort Stewart, Ga.; from Fort Drum, N.Y. to Fort Bliss, Texas, relocatable buildings are in use housing, feeding and providing operational space for the Army's new BCTs.

In addition to regular support to Army installations, USACE has been extremely busy with hurricane recovery efforts along the Gulf Coast. This issue includes a recap of how the Katrina disaster unfolded and steps being taken by USACE to clean up, restore and rebuild areas devastated by back-to-back hurricanes Katrina, Rita and Wilma.

Also in this issue are stories acknowledging outstanding achievements in energy savings, and recognition of fire and emergency services at Fort Bliss, Texas. The White House and Department of Energy presented awards to government teams and organizations for saving energy and reducing energy costs by \$23 million dollars collectively. Fort Bliss, Texas, Fire and Emergency Services Department was named the Defense Department's Best Fire Department for 2004.

In response to the potential for a chemical or biological terrorist attack, the Baltimore District, USACE, dedicated the \$46 million, state-of-the-art Advanced Chemistry Laboratory, which will deal with potential threats presented by the most dangerous chemicals on earth.

The Environmental Protection Agency has modified the definition of hazardous waste with respect to wastewater. Effective federally on Nov. 3, but not effective in Resource Conservation and Recovery Act authorized states unless adopted, this rule, known as the Headworks Exemption, adds exemptions from the definition of hazardous waste for wastewater.

Other articles explore maintenance and repair planning and the Centralized Barracks Management (CBM) Program. Engineered Management Systems, also known as Sustainment Management Systems, give installation facility managers an objective, repeatable way to assess condition and set priorities for just-in-time allocation of maintenance and repair funds. Through the Centralized Barracks Management Program, single Soldiers will in-process the same as Soldiers with families for assignments and terminations, similar to Army Family Housing.

Year-end has the Public Works community saying farewell to Maj. Gen. Ronald L. Johnson, former director of the IMA, who left to become the deputy chief of engineers and deputy commanding general of USACE. We also welcome Maj. Gen. Michael D. Rochelle as the new IMA director. Other personnel changes saw leadership changes within the Facilities Policy Division at OACSIM.

Debra Valine

Debra Valine, Acting Managing Editor, *Public Works Digest* **PWD**



USACE Installation Support Year-End Report

by Pete Almquist

We just completed the second year of the productive partnership between the U.S. Army's Installation Management Agency (IMA) and the U.S. Army Corps of Engineers (USACE). By regulation, USACE has the lead in executing the Army's Military Construction Program. In contrast, installation managers select the installation support services of USACE as they have a wide range of choices for their non-MILCON service providers. The support that USACE provides to Army installations has three distinct parts – the Military Construction Program, the reimbursable program, and its small “sister” – the direct funded (non- reimbursable) Installation Support Program.

The reimbursable program represents the funds and work that Army installations choose to spend with USACE to execute IMA's Sustainment, Restoration and Modernization (SRM) program. This is typically the maintenance, repair and minor construction work for the Army's real property – hospitals, training ranges, barracks, administrative facilities, and a myriad of other facilities that makes up Army installation infrastructures. Environmental support, real estate services, engineering and planning studies and similar work at installations are also accomplished by USACE on a reimbursable basis. Each installation Directorate of Public Works (DPW) makes the call of how they want to spend their SRM dollars – with USACE, Navy, Air Force or private contractors. SRM dollars spent worldwide run in the hundreds of millions of dollars.

The IMA direct funded Installation Support program is small by comparison. In FY05 HQIMA provided about \$9 million to USACE to support a five-pronged support approach to help accomplish critical Public Works missions at IMA Headquarters, regions and installations worldwide. Typically the direct funded IS program provides the following support:

Installation Support (IS)	
IS Component	What this Buys
PM Forward	Co-located at DPW at major installations; Partners w/DPW; coordinates USACE support & solutions; enhances responsiveness/ commo, provides tech assistance
Regional Liaisons	Co-located at each IMA Region HQ; Partners with regions, coordinates USACE support, provides tech assistance
Checkbook	Buys contracts, in house engr services, small projects in direct support of DPW missions
Installation Support Offices	Located at USACE MSCs, coordinates USACE IS program, provides tech assistance across region
Installation Support Center of Excellence	Located at Huntsville Engr Center; provides direct support to DPW (Util Acq & Sales, util rate intervention, energy, fire prevention, and wide range of reimbursable support.

11/28/2005

Shifting away from the “Big Picture” of the Installation Support Program, we want to highlight some details about the North Atlantic Division (NAD) & Installation Management Agency Northeast Regional Office (NERO) IMA-USACE Partnership; the assistance provided by the Huntsville Installation Support Center of Expertise (ISCX); and selection of the first Installation Support Professional of the Year.

The USACE North Atlantic Division (NAD) & IMA Northeast Regional Office (NERO) Partnership – NERO and NAD have a true teamwork approach to supporting 28 Army installations in NERO's footprint. NERO's mission is to guide, direct, enable and oversee assigned garrisons, assess and convey resource requirements to HQIMA, and respond to installation management requirements. NAD oversees four military districts that provide engineering support to NERO's garrisons. Last year NERO installations purchased about \$1.5 million in direct support services from NAD. This workload included USACE's BRAC planning support, planning charrettes, 1391

preparation support, master planning, contract support, and engineering technical support, in addition to other services. The chart on page 5 gives a snapshot of where the FY05 direct funded installation support dollars went in NAD's support of NERO's installations.

The key to this working relationship lies with NERO's Public Works Division Chief, Steve Mason, and NAD's liaison to NERO, Frank Mordecai. Mordecai works closely with Mason to ensure that the limited dollars are spent in support of HQIMA's and NERO's highest priorities. Obviously there is never enough money to “do it all.” The challenge is to ensure resource expenditures coincide with Army, ACSIM and IMA priorities, and produce the biggest benefit to the Army.

Mordecai describes his job as “customer's advocate, adviser, consultant, integrator and coordinator for all USACE activities occurring on all installations under the command of the IMA Northeast Region.” Other terms sprinkled throughout his job description are “One door to the Corps,” “customer satisfaction advocate,” “partner,” responsible for ➤



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"building the spirit of teamwork," "significantly increasing level of Corps support," "providing seamless access to all Corps capabilities," "becoming accepted as a member of the customer's staff," and "promoting better understanding of Corps organizations." Interestingly, Mason is Mordecai's direct rater for his performance evaluation. This trust is an essential part of the productive partnership working between NERO and NAD teams.

Mason is equally enthusiastic about the relationships and support he receives from Mordecai and the USACE team. In a note to Don LaRocque, chief of the Public Works Division at HQIMA, Mason said, "Don - this is a follow up to my previous note. I am a strong supporter of this program. It has done wonders in reducing the friction between the DPWs and the Corps. The two guys here are well worth their salary in the assistance they provide to NERO and the invaluable feedback they provide the Corps about our ever-changing job/needs. This is the best working relationship I have ever had with the Corps

in 27 years."

Of course there are times when everything is not as smooth as all partners would like it to be (this is a tough business, after all!), but this is a strong partnership that greatly benefits the IMA's Northeast Installation Management Region, its installations, the U.S. Army Corps of Engineers North Atlantic Division, and most importantly, the Army, its Soldiers and their families!

Huntsville Center Installation Support Center of Expertise (ISCX)

Mirko Rakigijja is the director of the Huntsville Engineering Center's ISCX and in a way works as the "liaison" to LaRocque. Rakigijja and LaRocque have a similar team relationship to that of Mordecai and Mason. Rakigijja's crack staff has fast tracked several key programs for LaRocque, and the support focuses mainly on supporting the Army's Transformation. A summary of the Huntsville team's efforts follows.

- **Army Transformation.** Provided ACSIM and IMA with programmatic

support for facility planning and MILCON programming. Led and coordinated the execution of more than 90 Brigade-level Requirements Analyses and Planning Charrettes. Provided 725 economic analyses for relocatable facilities at 39 installations.

- **Ranges and Training Land.** Provided program management and engineering support to Army G-3 for the Army's Range Modernization Program, which consists of more than 200 projects throughout the world.
- **Facilities Reduction/Demolition.** Provided support to IMA by managing the OMA and AFH facility reduction programs. Removed 294 excess buildings (1.32 million sq. ft.) at a net average of \$9.34 per SF.
- **Utility Rate Interventions.** Initiated six rate intervention and negotiation proceedings, at a cost of \$268,000. One proceeding is complete, resulting in \$3.2 million per year cost avoidance at four Army installations in Georgia. Five proceedings are still before Public Service Commissions; substantial additional cost avoidances are expected. ➤

North Atlantic Division (NAD) – Installation Support FY05 Funding Utilization Report (Total Obligated – \$1,506,202)

Installation Support Program Management from NAD ISO (AO)

- Overall Programmatic and Financial Management and Coordination for two regions (NERO/EURO)
- Regional Planning Charrette PgM Management
- Other Programs/Initiatives Support (BRAC, Modularity, Contracting, etc.)

Regional PM – Forward Support (PM-F)

- Regional Emergency Management Operations Support

Studies & Tech Support (TS)

- Various Engineering Support Actions
- Structural Inspections and Assessments
- Small Project Studies & Design Support
- Providing Engineering Solutions
- Conditions Inspections
- Electrical Engineering Support

Special Programs Support (SP)

- BRAC Planning Support

Regional Master Planning Support (MP)

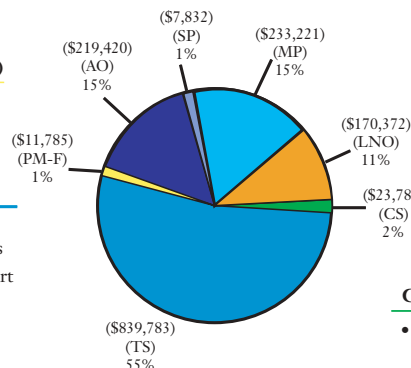
- Planning Charrette/1391 Support
- ASIP/RPLANS Assessments and Updates
- Master Plan /Design Guide Support

Liaisons (LNO)

- EURO – Dedicated Full Time Regional Liaison Support
- NERO – Dedicated Full Time Regional Liaison Support
- (MILCON, Planning, BRAC, Modularity, Emergency Management Operations Support, etc.)

Contracting Support (CS)

- Solicitation Development for Region-wide Emergency Operations Support Contract





The ISCX mission is to support headquarters and field organizations in a variety of public works areas, such as facility planning and programming for Army Transformation and BRAC; ranges and training land; facility demolition; utilities procurement; energy services; installation access security; and barracks and office furniture and furnishings.

Installation Support Center of Expertise, Huntsville Center

by Mirko Rakigijja

The U.S. Army Engineering and Support Center in Huntsville, Ala., (HNC) is the Corps of Engineers' Installation Support Center of Expertise (ISCX). HNC's charter includes programs that are national/worldwide or broad in scope; require integrated facilities or systems that cross geographical boundaries; require a centralized management structure; or require commonality, standardization, multiple-site adaptation or technology transfer.

HNC uses new technologies developed by the Corps' laboratories and partners with districts to provide timely, cost effective and consistent installation support, thereby creating synergies in the "One Door to the Corps" support concept. Support ranges from programmatic in nature for large geographically dispersed programs that involve centralized planning and management with decentralized execution to partnering in executing challenging state-of-the-art projects. The ISCX is committed to providing out-

Huntsville Center links business practices and innovative processes in support of DoD installations. This support ranges from programmatic for large programs to partnering in executing challenging projects.

standing mission and quality of life support to military installations.

A sampling of the type of support provided by the ISCX follows:

Army Stationing Facilities Support (ASFS)

Provides the Office of the Assistant Chief of Staff for Installation Management (OACSIM) and the Installation Management Agency (IMA) with centralized programmatic support in the execu-

tion of master planning and military construction (MILCON) programming. Leading and coordinating the execution of more than 90 Brigade-level Facilities Requirements Analyses (RA) and Planning Charrettes (PC) as Army installations plan to move more than 140,000 personnel over the next six years to support the Army Modular Force (AMF), Global Posture Initiative (GPI), and Base Realignment and Closure (BRAC) 2005 stationing initiatives. Support includes managing programmatic resources, normalizing costs associated with the execution of RAs and PCs, ensuring consistency of products, and performing quality assurance of services and deliverables provided by districts and contractors. ASFS also provided 725 economic analyses for relocatable facilities at 39 installations, including lease/buy analyses and source of funding determination for relocatable buildings support to districts and installations putting together relocatable facility request packages. ASFS ➤

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- **Utility Rate Surveys.** Provided support to IMA by performing utility rate reviews and surveys at 41 installations. At a cost of \$568,000, identified cost avoidance opportunities of more than \$7.7 million and provided advice to installations on energy reduction approaches.
- **Energy Savings Performance Contracting.** To date, HNC's ESPC contractors have invested \$418 million in 70 energy-related infrastructure projects at 30 installations.
- **Access Control Points.** Delivered and installed \$80.3 million in mobile security

equipment and \$77.7 million in fixed security equipment at 300 installations worldwide.

- **Furniture.** Provided support to ACSIM by managing the procurement and delivery of furniture and furnishings for barracks Army-wide. Procured furniture for 17,079 living spaces, realizing \$4 million in programmatic savings.

Installation Support Professional of the Year

Sally Parsons was selected as the first USACE Installation Support Professional of the Year. Parsons is the Transformation/BRAC program manager at Huntsville Center and leads efforts to

ensure seamless integration of all HNC support to HQUSACE, ACSIM and IMA as the Army reorganizes into Brigade Combat Teams (BCT) to support the Global War on Terrorism. Her responsibilities include coordinating and integrating planning, programming and acquisition planning support as USACE executes the DASA (I&H) directive to revise the MILCON acquisition and construction processes to provide cost effective facilities in a timely manner.

Her enlightened leadership and managerial skills, expertise and breadth of experience have resulted in her being entrusted to lead the most urgent and ➤



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supports Headquarters, U.S. Army Corps of Engineers execution of MILCON Transformation by coordinating and integrating planning, programming and acquisition planning support. MILCON Transformation is the Deputy Assistant Secretary of the Army, Installations and Housing (ASA-I&H) directive to revise the MILCON acquisition and construction processes to provide cost effective facilities in a timely manner to support our Soldiers and their families.

Ranges and Training Land

Provides program management and engineering support to the Army's Range Modernization Program, which consists of more than 200 projects throughout the world. Support includes establishing engineering criteria and standard designs, initial planning and site selection, facilitating planning charrettes and preparing MILCON programming documentation (DD Forms 1391) for Army G-3 funded training ranges. Provides programmatic oversight and technical support to districts responsible for design and construction of range projects. The new range planning process includes a multi-disciplinary (ATSC, RTLP-MCX, O&E CX, PEO-STRI and AEC) Technical Team assessment process in the planning char-

rettes. Project assessments evaluate the executability of the project from the following functional areas: training capability, surface danger zone (SDZ) capability, constructability and standard design compliance, National Environmental Policy Act (NEPA) supporting documentation and issues, telecommunications infrastructure and unexploded ordnance. These requirements, together with roles and responsibilities, the revised project development process and integration of RTLP programmatic support activities, have been incorporated in AR 350-19 (30 August 2005) and Engineer Range regulation to be published in FY06.

Facilities Reduction/Demolition (FRP)

Supports Installation Management Agency's OMA and AFH funded demolition program. HNC provides centralized planning and management with decentralized execution by installations and districts. FRP tracks the demolition of facilities funded as part of MCA and looks at future MCA projects before they go to Congress to ensure "One for One" are viable candidates for demolition. In FY05, FRP removed 294 excess buildings (1.32 million square feet) at a net average cost of \$9.34 per square foot through efficient planning, budgeting, coordination, management and value engineering assessments. The pilot NERO regional IDIQ

demolition contract uses an improved acquisition strategy with standardized contract language to ensure employment of industry best practices, thus reducing costs and improving recycling and waste stream reduction. Use of this contract will attain approximately \$5 million cost savings for Fort Hamilton, NY, and Fort Myer, VA demolition projects. We are expanding this approach to other regions. Awarding contracts at considerably lower than Army norms can be attributed to better demolition practices. Lead based paint and asbestos need not be abated to renovation standards prior to demolition. In addition, crushing concrete and brick and using them on site as backfill substantially reduces demolition costs. The Web-based FRP Best Practices Toolbox provides a standardized regionally sensitive cost estimating tool, economically feasible waste stream diversion percentages, recommended best demolition practices from lessons learned and easy access to an electronic technical library. We have developed an ISR, RPLANS and IFS data query/comparison approach that enhances the garrison's ability to make more informed decisions on long- and short-range facilities planning.

Utility Rate Interventions

This is a joint ISCX effort with the U.S. Army Regulatory Law Office to ➤

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important programs in the Installation Support Center of Expertise (ISCX). She is the consummate professional, committed to mentoring her peers and many others in providing quality support to installations, resulting in improved working and living conditions for our Soldiers, families and civilians.

Sally, Thanks for a job well done!

FY 2005 was a giant stepping-stone for the USACE & IMA Installation Support Program. While the NAD/NERO team effort highlighted in this article has shown much success, there are six other highly



Sally Parsons.

productive relationships among USACE divisions and IMA regional offices (in the continental United States and overseas), that display similar partnering and teamwork. HNC Installation Support Center of Expertise assistance to HQIMA has been crucial to the Army as they prepare for executing "The Perfect Storm"

of BRAC05, IGPBS, Army Modular Force, GWOT Support and the MILCON program. While much remains to be done, the Installation Support Community of Practice had a banner year with ACSIM, IMA and USACE partnerships working together to make our Army communities better places to live, work and play. Now it is on to bigger and even more important challenges in the New Year!

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ensure that the cost of utilities services remains fair and reasonable. During FY05, we initiated six rate intervention and negotiation proceedings at a cost of \$268,000. One proceeding is complete, resulting in \$3.2 million per year in cost avoidance to four Army installations in Georgia; five proceedings are still before Public Service Commissions; substantial additional cost avoidances are expected. Industry publications and available information on State Commission Web sites indicate that during FY06 approximately 10 utility general rate increases can be expected. These rate increases can be attributed to higher interest rates and fuel costs, expiration of electric rate caps imposed in conjunction with electric industry deregulation, increased security and environmental requirements, and upgrade and replacement of infrastructure.

Utility Rate Surveys

In support of the Installation Management Agency, we performed utility rate reviews and surveys of 41 Army installation utility systems. These surveys, at a cost of \$568,000, identified cost avoidance opportunities of more than \$7.7 million, primarily from installations using the correct tariff schedules, taking advantage of demand side management actions, and installation of energy management control systems. In addition, survey reports provided suggestions to installations on specific energy reduction approaches.

Energy

Provides solutions required to meet installations' energy goals. Energy Savings Performance Contracting (ESPC) is a major tool used to achieve energy savings whereby 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 10 to 25 years. Our energy contractors have invested \$418 million in 70 energy-related infrastructure projects at 30 installations. We are currently developing several new Army ESPC projects.

Access Control Points (ACP)

The ACP Equipment Program (ACPEP), sponsored by the Army Product Manager for Force Protection Systems, purchases and fields security equipment to all Army installation access points worldwide. We leverage the existing Corps of Engineers' worldwide presence to assess installation access control points, make appropriate equipment rec-

Huntsville Center – provides quality, efficient and consistent services through:

- Focus on customers' needs
- Business processes
- Innovative contracting
- Partnerships that reduce boundaries
- Quantifiable team measures of success
- Reward employees based on their team's success
- Continuous improvement

ommendations, and then efficiently implement the resulting approved projects. To date, \$80.3 million in mobile security equipment and \$77.7 million in fixed security equipment has been delivered and installed at more than 300 installations worldwide. Follow-on work beyond equipment is planned at access control points in order to bring all Army ACPs into compliance with the updated standards approved in December 2004.

Furniture

In support of ACSIM and Installation Management Agency, manages the pro-

urement and delivery of furniture and furnishings for new and renovated barracks Army-wide. In FY05, procured furniture for 17,079 living spaces, including 4,598 initial issue barracks spaces and 12,481 other spaces. Realized \$4 million in programmatic savings. Used standardized and efficient program processes, including electronic ordering. Savings were used to furnish more than 10,000 spaces of critical replacement furnishings in support of Soldiers returning from Global War on Terrorism overseas assignments, medical hold, and other needed barracks furnishings, including more than 500 spaces to support National Guard and other Soldiers left homeless from Hurricane Katrina. Together, this means

that 17,000 Soldiers (and their families in 100 instances) have better places to live. New missions in FY05 included centralized management of the Army Replacement Furnishings Program and the Army Trainee Barracks Furnishings Program. A new mission for FY06 is the provision of office furniture for new MILCON facilities.

The Installation Support Center of Expertise (ISCX) links business practices and innovative processes in its partnerships with districts in providing comprehensive and cost effective processes and support to DoD installations.

Through centralized management with decentralized execution, ISCX leverages program management, engineering, contracting and legal matrix expertise embedded in its virtual project delivery teams. We value our accomplishments and take pride in our contributions to the mission and quality of life of our military installations, and look forward to continued service in meeting an evolving array of challenges.

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Closing the gaps in understanding installation capabilities and technology

by Philip R. Columbus and Kelly M. Dilks

Over the past year, the Technology Standards Group (TSG) mission has expanded to incorporate more than current technology solutions. The TSG was directed to develop a process to identify current and future installation capability requirements and to work with existing Army processes. This effort is called the Installation Capabilities Process.

The initial effort in this area was conducted jointly between the Office of the Assistant Chief of Staff for Installation Management (OACSIM) and the U.S. Army Corps of Engineers (USACE), Directorate of Research and Development (CERD). Led by CERD, the TRADOC Pamphlet 525-66, Military Operations, FORCE OPERATING CAPABILITES, Section VIII – Strategic Responsiveness and Deployability, was modified to include FOC-08-04: Installations as our Flagships. FOC-08-04 describes the role of installations in Power Projection, Maintain Readiness and Quality of Life. Section VIII links

installation responsibilities to doctrine. The follow-up task, a gap analysis between current and required capabilities, is ongoing.

The next major effort in supporting the life cycle of installation capabilities is the creation of the installation capabilities writing team. OACSIM Facilities Policy Division organized a meeting of the Installation Capabilities Process writing team in August. Members from OACSIM (Facilities and Housing Directorate, Office of the Director Environmental Programs and the Army Reserves), ASA (I&E), G-8, National Guard Bureau, and Headquarters, USACE, participated in the kick-off meeting. Primary and secondary writing team members were acknowledged and the next steps for success identified. Look for updates on status of the Installation Capabilities Process writing team's efforts in future editions of *Public Works Digest*.

In addition to the FY05 efforts described above, the TSG continued to actively pursue technology appropriate to

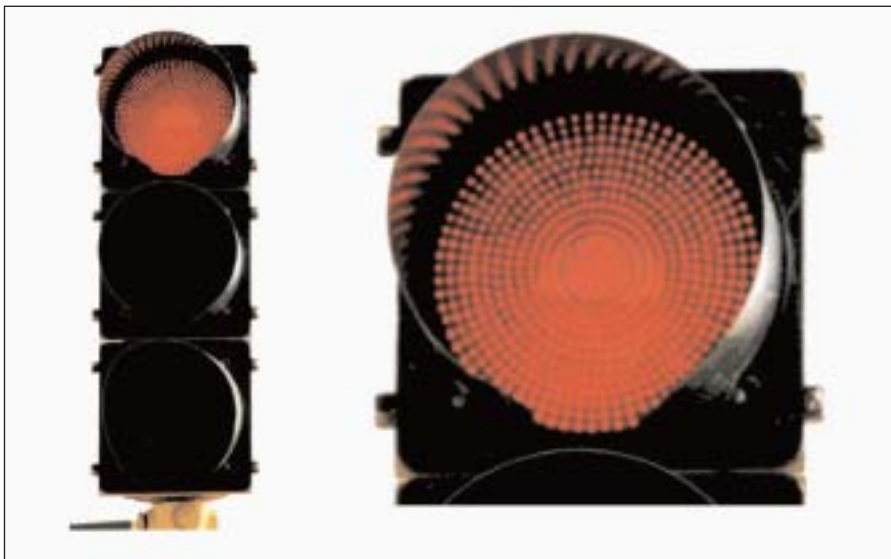
be recognized as an Army standard. In FY05, technical evaluations were conducted on Non-Water Using Urinals, LED Traffic Signals and Keyless Entry Technology. Non-Water Using Urinals and LED Traffic Signals were chosen as appropriate to be put forward as Army standards, and are being staffed for concurrence on the recommendation.

LED Traffic Signals were recommended as Army Standards for many reasons. The first is that they use less electricity, which is consistent with and supportive of technology contained in the U.S. Army Energy Strategy for Installations (signed by Sec Army July 2005). LED traffic lights also last 5-10 times longer than traditional light bulbs and do not experience the sudden failure, decreasing the likelihood of a catastrophic failure becoming a safety hazard.

Technologies slated for FY06 technical evaluation include: Wood Truss Inspection techniques, Utility Marking, Building Information Model (BIM) elements and Sustainment Management Systems. Stay tuned to the *Public Works Digest* for status updates on these technology evaluations as well as the other Installation Capabilities Process initiatives.

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Philip R. Columbus is a general engineer in the Facilities Policy Division, Office of the Assistant Chief of Staff for Installation Management; and Kelly M. Dilks is a researcher at the Engineer Research and Development Center, Construction Engineering Research Laboratory. **PWD**



LED Traffic Signal



Alternative Building Removal Program (Alternatives to Traditional Demolition)

Fort Lewis and Seattle District USACE

Fort Lewis, Wash., has several hundred World War II-era buildings scheduled for demolition over the next seven years. In an effort to reduce the amount of solid waste disposed at local landfills resulting from the demolition of these structures, Fort Lewis and the Seattle District U.S. Army Corps of Engineers have embarked on an ambitious journey into the realm of sustainable waste management practices and the use of alternatives to traditional demolition.

The Army's strategic vision mission statement states that the Army will sustain the environment to enable the Army mission and secure the future. The Army recognizes the interdependence between the mission, the environment and the community, and is actively promoting an ethic that goes beyond environmental compliance to sustainability, while minimizing impacts and total ownership costs of Army systems, material, facilities and operations, and management. To succeed at these goals, the Army recommends the use of innovative technology and sustainable practices to meet installation needs and anticipate future challenges.

In response to the directives of the Army, Fort Lewis has developed an installation-wide sustainability program. Several of the stated goals relate to sustainable waste management practices. One goal is to cycle all material use to achieve zero net waste by 2025. Another goal is to attain healthy, resilient Fort Lewis and regional lands that support training, ecosystem, cultural and economic values by 2025.

To support the Army and specifically the Fort Lewis sustainability goals, the Seattle District has actively teamed with representatives of Fort Lewis' Directorate of Public Works (DPW) to develop and execute a carefully designed sustainable solid waste approach to the demolition projects planned over the next several years. Elizabeth Chien, an environmental engineer at the Seattle District, has teamed with Ken Smith, chief of the Environmental Operations

"best value" approach to contract award. Demolition projects that are specified as part of a MILCON project or as part of the FRP are awarded as separate projects to environmental construction contractors experienced with the removal/demolition of WWII era structures, including associated environmental issues (hazardous materials such as asbestos, lead and mercury; underground and above-ground fuel storage tanks, petroleum and lead contaminated soils; and items containing ozone-depleting substances).

The Corps reduced planning, design and administrative costs by treating the demolition projects as separate and distinct projects and awarding them using existing contracting mechanisms such as Independent Delivery Indefinite Quantity Contracts, Multiple Award Remediation Contracts, and Multiple Award Task Order Contracts.

Contract specifications require a minimum diversion rate of 50 percent, with a goal of 75 percent for construction and demolition

(C&D) debris (reuse, salvage, resale and recycle), and compensate the successful contractor for achieving higher levels of C&D diversion. Additionally, contract specifications require detailed tracking of waste, including what it was, where it was taken, was it diverted, how was it diverted, and quantity. This tracking and recording of the solid waste removed from a demolition project will result in appropriate data for the project to be provided to Fort Lewis for their required Solid Waste Annual Report, as well as provide data for future projects and estimations of quantity and type of C&D waste resulting from the demolition ➤



Attendees learn about alternative building removal processes at the seminar.

Branch, Fort Lewis DPW; Tom Napier, research architect, for the U.S. Army Corps of Engineers, Construction Engineering Research Laboratory; and Ed Engbert, environmental engineer, U.S. Army Environmental Center, to develop construction specifications and demolition contracts that directly address this new approach to demolition projects that are part of the military construction (MILCON) and Facilities Reduction (FRP) Programs.

Innovative contracting approaches and performance-based construction specifications allow the greatest flexibility for the Corps of Engineers and support a



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of these types of structures. This combined effort of innovative contracting and performance-base criteria result in the contract being awarded to contractors familiar with hazardous waste removal and demolition activities using sustainable waste management approaches.

One issue identified early on by the team was that this approach to demolition at Fort Lewis was very different from the traditional demolition practices employed by the contractors. The contractors were requesting information regarding how to achieve the contract diversion levels. Therefore, an additional step this team took was to facilitate a series of educational video conferences, meetings and an alternative building removal "open house" designed to familiarize the contractors with the resources available to them to accomplish higher levels of C&D diversion.

The alternative building removal "open house" was attended by 35 contractor and local resource representatives. Attendees took advantage of the event to begin the process of developing new teams designed to provide Fort Lewis and the Corps of Engineers with demolition teams experienced and capable of meeting sustainable solid waste diversion goals and, ultimately, the goals of the Army, Fort Lewis and the Corps.

Resources provided during the "open

house" included facilities available at the Fort Lewis Sequatchew Eco Park (concrete/asphalt/masonry reuse, petroleum-contaminated soil treatment and reuse facility, composting facility, and reuse of non-hazardous lead-contaminated soil at the training firing ranges); local salvagers and resellers; recyclers; and deconstruction specialists. Generalized means, methods and technologies were presented, without prejudice, allowing for the contractors to develop their own individual approach that would combine mechanical demolition, deconstruction, salvage and recycling, providing the highest level of diversion for the best value.

The efforts of this team have culminated in the award of two fiscal year 2005 MILCON demolition projects (33 buildings total), and the planning of upcoming fiscal year 2006 and fiscal year 2007 MILCON demolition projects (100 buildings total) to be awarded in 2006.

Fort Monroe, Va., and Fort Campbell, Ky., have already successfully completed several demolition projects using alternative building removal methods and sustainable solid waste management. Fort Lewis and Fort Jackson, S.C., have awarded contracts developed with this



Attendees from the seminar travel to see the demonstration buildings.

approach in mind and are in the early stages of executing those contracts. The positive experience that Fort Lewis and the Seattle District have had in developing sustainable waste management practices and the promotion of alternatives to traditional demolition is helping to provide a level of confidence to the broader Army for its future plans to adjust its policy for sustainable C&D waste diversion, and for the planning and design of demolition projects by other Corps districts.

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A group of attendees tours one of the demonstration buildings.



Attendees are back row, from left: Brendalyn Carpenter (Ft. Lewis DPW), Dave Bennick (REUSE Consulting), Kodwo Dadzie (USAEC), Ann Walzer (CTC), Ron Norton (Ft. Lewis DPW), Ed Engbert (USAEC), Ken Smith (Ft. Lewis DPW), and Elizabeth Chien (USACE-Seattle Dist.). Front row from left: Lana Leiding (Ft. Lewis DPW), Julie Napotnik (CTC), Tom Napier (USACE-CERL), and Mike Carnes (Solid Waste Solutions).



New ways of doing business can save government money

by Debra Valine

While removing a facility at Fort Rucker, Ala., two boilers were discovered to be in good serviceable condition. The plan had been to haul them away to the local landfill; however, the team knew Redstone Arsenal, Ala., was looking to purchase new boilers of a similar size. A little coordination between the two installations resulted in having boilers from Fort Rucker transferred to Redstone Arsenal while providing significant savings to both installations.

This is one example of a best practice when conducting facility removal. Another recent example involves having unneeded playground equipment moved from one installation to another where a need for similar playground equipment existed.

The Facilities Reduction Program at the U.S. Army Corps of Engineers, Huntsville Center, has several methods for making the best decision at the best value. Harold Merschman, the program manager, and his team are available to help government employees and contractors alike determine the most efficient, least costly way to conduct business.

"There is a paradigm shift under way on taking down unneeded facilities," said David Shockley, a Huntsville Center project manager working for Merschman. "Most people take down buildings with the same group of contractors they use to build or renovate them. Generally speaking, building contractors charge more to take down a building than contractors who demolish buildings for a living."

It's a matter of finding the right contractor for the job. It's called having a cost effective acquisition strategy.

"When you tear down a structure and pull out concrete foundation, it leaves holes in the ground," Shockley said. "If you take the concrete and haul it away to the landfill, you then have to buy something to fill up the hole. We have encountered cases where contractors were paid to haul away concrete foundations and then paid again to bring it back as engineered backfill after it had been ground up – sometimes even from the same contractor. What a deal, they get paid to take our concrete, grind it

up and then sell it back to us on the same project. We need contractors who have the machinery to grind our concrete on our site and put it back in our hole."

Another cost-saving method for removing large pieces of concrete involves finding a source looking for large pieces of concrete and moving the concrete to that source rather than to a landfill or grinding it up.

Shockley tells of another scenario involving lead-based paint and asbestos removal.

"There is a prevailing historical norm where a lot of people are trying to be conservative and do the right thing environmentally," Shockley said. "While I applaud their intent, many unnecessarily abate lead-based paint from structures to get them ready to tear down. They do it because they think it is required, but our research clearly indicates that abating lead-based paint for facility demolition is not required by state or federal regulation. If lead-based paint is abated from a structure when it isn't required, the cost is higher, and it's wrong to spend funds on things we don't have to have. When you grind the debris from a building and there's enough lead present, the waste material is classified as hazardous and must be disposed of appropriately. But it all depends on how much lead is there. There's a formula to determine how much lead will be there and tests are conducted to verify those amounts. There can be situations where choosing to abate lead-based paint prior to tearing a building down is more cost effective if the debris classification would change from hazardous to normal depending of disposal cost differences but that would be a rare event."

People also tend to use the same abatement contractors with similar scopes of work to remove asbestos prior to tearing a building down that they would use prior to a renovation project. When you get ready to tear a building down, you don't necessarily use the same standards you would use to get it ready to make it into a child care center, Shockley said. For example, if a building had asbestos floor tile in it and you were renovating, the tile would probably

have to be removed and bagged manually, but if you were tearing the structure down, you would probably keep the floor foamed while the big machines destroy the whole structure. The government can save a lot of money by not abating asbestos with the wrong scope.

"We often get packages to review from installations that are looking for the right way to go about doing this business," Shockley said. "We review them and let them know how we would approach it. Because we see a lot of projects at a lot of installations and because we do this for a living we often see opportunities that an installation or even local Corps of Engineer District might not see. It isn't uncommon for contracts to be awarded for less than half of what was expected after we've been involved in their acquisition strategy.

Another way government employees and contractors can find the best way to perform a job is to use the Best Practices Toolbox which is hosted on Engineering Knowledge Online (EKO). Anyone with Army Knowledge Online (AKO) can fully access this Web site at: <https://eko.usace.army.mil/frptoolbox/index.cfm>.

The Best Practices Toolbox has three basic functions that can be very useful:

- It has an estimating capability that will give you what demolition should cost based on very little provided information. These estimates also identify the minimum landfill diversion quantities that should be attained as building demolition debris is put to cost effective use rather than blindly hauled away. It makes the probability of getting a good price much better.
- The toolbox provides a list of best practices, such as how to deal with lead-based paint, asbestos and things deep in the ground, such as utilities and foundations. It identifies what the best practices are based on where you are.
- The toolbox also contains a technical library relating to facility removal. In addition to what the Huntsville team posts, electronic shelves exist in this ➤



Engineered Management Systems make sense out of maintenance and repair planning

by Mike Dean, David Bailey, Mike Grussing, Mo Shahin and Dana Finney

With today's tight maintenance and repair (M&R) budgets, knowing what work doesn't need to be done is just as important as knowing what does – and when. Engineered Management Systems (EMSs), also known as Sustainment Management Systems, give installation facility managers an objective, repeatable way to assess condition and set priorities for just-in-time allocation of M&R funds.

The Construction Engineering Research Laboratory (CERL) developed the EMS concept starting in the 1970s, in response to a growing need for strategic M&R planning. The systems involve an inventory, followed by regular inspections of some percentage of the facilities each year. Inspection data entered into a computer program produces a condition index rating from zero to 100, where zero is completely failed and 100 is perfect. The premise is that somewhere between 0-100 lies a condition rating that is optimal for a maintenance or repair project. Scheduling work before that point is unnecessary, whereas delaying much beyond that rating will speed the requirement – and raise the cost – for major rehabilitation.

With the condition information, EMSs allow managers to evaluate different options in making M&R decisions. For pavements, they can look at repair alternatives and the life-cycle expectancy of each. For roofs and railroads, the only option is to repair or not, and the EMS shows which roofs and rail segments should be the highest priorities. The systems support planning at the project level and also for entire networks, providing plans for up to 10 years out. They also feed reporting requirements for the Installation Status

Report (ISR), and can be customized to provide nearly any output the local decision-makers wish to see.

Three EMSs: PAVER, ROOFER and RAILER, are being used successfully by numerous installations, municipalities, states and federal agencies. Each system has a support center that provides training, technical assistance and contracting templates to implement a complete or partial maintenance management program. In addition, many private sector companies specialize in using the CERL-developed EMSs and offer these services under contract. Following are examples that show how installations are using the systems to manage their assets.

Fort Riley Puts ROOFER to Work

With more than 250 million square feet of built-up roofs at Fort Riley, Kan., it's easy to justify an automated approach to M&R. "I don't see how any installation or other agency could budget and plan for roofing maintenance without some type of roof management system," said Andy Anderson, architect in the Department of Public Works (DPW).

Fort Riley has a robust ROOFER program that has been in place for about 15 years. The goal is to inspect one-fourth to one-third of the roofs annually and a four-year contract was awarded last spring, according to Anderson. Inspection costs 8-1/2 cents per square foot under this contract, which includes all of the vendor's expenses. The fort had 448,000 square feet inspected this year at a cost of \$38,000.

In ROOFER inspections, the membrane, flashing and insulation components are evaluated individually for low-slope roofs. For asphalt shingles, the shingles

and flashings are evaluated. Treating each component separately provides an accurate assessment of component condition, waterproof integrity and repair needs.

Trained inspectors conduct visual surveys of the roof field and flashings. They measure and record existing distresses using standardized procedures. For insulated membrane roofs, moisture surveys using methods such as infrared thermography can identify potential areas of wet roof insulation. Core cuts from these areas are extracted and analyzed to determine moisture content.

At Fort Riley, the ROOFER approach combines in-house expertise with contract services. "The contractor does the inspection and enters the findings into the ROOFER database, and then I take it from there," Anderson said. "We also have a four-year, open-ended contract to repair and replace our roofs, and I use ROOFER's results to write job orders against that contract for work that's needed."

The first-time startup cost for ROOFER for an average of 2.5 million square feet of roofs is about \$175,000. Depending on the size of the roof network, it may be advantageous to divide implementation into phases by segmenting the network into logical groupings such as building type or geography. CERL can provide a set of contract requirements to help in procuring ROOFER services.

PAVER Drives M&R Decisions at Forts Bragg, Riley

When Ted Kientz saw features of the newest Micro PAVER version demonstrated, he was convinced that he wanted to reinstate the system as a tool to help

"We have people here who can help others who are looking for facilities reduction solutions," Shockley said. "All they have to do is call us at (256) 895-1338 or (256) 895-1369." PWD

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library to allow the Engineering Research and Development Center's Corps of Engineer's Research Laboratory and the Army Environmental Center to post documents

directly into this online library at any time.

These are a few examples of how the government can work through facilities reduction issues. The team at the Huntsville Center is available to help.



manage pavement M&R at Fort Bragg, N.C. He was able to do so last year thanks to the way resources are now being allocated under the Installation Management Agency (IMA).

"It was our initiative to use PAVER, and this is the first year in several that we got funding at a level that we can start doing the things we need to do," said Kientz, civil infrastructure program manager at Bragg's DPW. "With \$300,000, we were able to put the automation in place and also complete assessments for all of our roads, including those at Camp McCall and Simmons Army Airfield."

Fort Riley also uses PAVER to manage its pavement M&R. While an earlier program had faded with budget cuts, downsizing staffs and retirements, implementation is fully back on track now. The biggest obstacle to using PAVER was the lack of funds for inspections, according to Roger Williams, civil engineer in the Engineering Services Division. "If you're not going to fund inspections, you may as well not implement the program." Williams is phasing inspections to complete one-third of the roads and parking lots each year, which will meet 100 percent of the annual requirement.

A feature of newer EMS versions that has been a major help to Directorates of Public Works is the embedded geographic information system (GIS). Based on the pavement condition analysis, they print maps – color-coded to ISR standards – that are much easier to digest than the previous tabular data. "A picture is worth a thousand words' when it comes to supporting our funding requirements," Williams said.

The cost for CERL to help installations implement PAVER is about 10 cents per

square yard, which includes the software, inventory, inspection, training, work plan report and other services. Departments of Public Works that manage their own programs can contract for reinspection work as low as 7 cents per square yard.

RAILER® Keeps Fort Campbell's Projects on Track

RAILER® combines railroad engineering technology and infrastructure management principles with track standards and analysis procedures for a comprehensive decision-support tool.

Fort Campbell, Ky., has only 40 miles of railroad track, but it serves a critical need in force projection and training activities. To ensure the track is ready to move equipment when necessary, Audie Hardin started using RAILER about eight years ago to manage a \$500,000 annual M&R effort.

"One of the good things about these systems is that they let you look at the history of the track – where defects occurred in the past – so you can keep an eye on it for budgeting purposes," said Hardin, who is chief of Campbell's Engineering Design Branch in the DPW. "The program helps provide information on what the routine costs will be based on past history, and then considering things such as how much material prices may go up, I know how much we'll need to budget each year. There can be budget busters, like the sun kinks we had with this past summer's heat, but for the most part, you get a good idea of what the needs will be."

Fort Campbell has CERL inspect about one-half of its tracks each year. The roughly \$30,000 annual cost includes services such as updating the database, making any needed changes to the GIS information and providing a comprehensive work plan. The DPW works closely



The PAVER system shows different repair options with their associated life-cycle and cost.

with CERL in work plan development to assess priorities based on RAILER's output. Each identified defect has a certain corrective work action and cost associated with it. The list generated in the analysis and displayed spatially in GIS also shows the effect on operations and where repairs are needed in areas considered mission-critical.

"I'm extremely pleased with the RAILER program," Hardin said. "It's a very effective tool to help me identify the work that needs to be done and to prioritize the budget request, which helps us compete for funds. Our request is based on a real engineering analysis and not just a scratching on the back of a napkin. If anyone out there is not on the bandwagon, they should be, because it gives you a huge advantage."

PAVER, RAILER and ROOFER are the Army Standard

PAVER, RAILER and ROOFER are the Army standard for Sustainment Management Systems and are based on national standards. These systems provide the tools for managers to properly assess conditions, evaluate repair options, and prepare repair and maintenance budgets. These systems have proven to pay for themselves within as little as one year. Training classes, assistance visits and detailed information briefings can be provided upon request.

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PWD



Roof inspections can be combined with infrared survey data to manage roof M&R.



Army Master Planning 2005-06; Managing Change

by Jerry Zekert

As 2005 comes to a close, the Army is facing a massive planning and development challenge to our installations. With the Base Realignment and Closure (BRAC) announcements, modularity and other re-stationing actions, our installations are facing substantial changes over a short time. This challenge places huge requirements to the master planning community to 1) site development of immediate additional facilities, in accordance with their installations' master plans; and 2) assure rapid development is sustainable, meet critical infrastructure assurance requirements and protect the long-term installations capabilities into the next 50-70 years. This article provides a review of major planning activities that have occurred in 2005 and the future direction of planning initiatives into 2006.

To prepare for this rapid change, the first element was a re-look of existing Army planning policy to assure the policy truly met requirements for planning of our installations. Army Regulation (AR) 210-20, Master Planning for Army Installations, which sets the policy for Army Master Planning, was updated and released to the field in May 2005. The regulation prescribed a more comprehensive, holistic planning process that required visionary, long-range focus on installation planning and development, framed around close integration with the National Environmental Policy Act (NEPA) process, and requiring comprehensive consideration for sustainability, infrastructure assurance and force protection, and required our installations to work closely with our surrounding communities. The regulation established the Real Property Master Planning Digest as a new and most critical component of the plan. It required all installations to develop a plan based on a vision for real property development, defined goals and objectives, focused Area Development Plans and Long Range Land Use Planning, structured Installation Design Guides and integrated Capital Investment Strategies. This update requires installation garrison commanders to think more strategically,

more long-term and away from short-range project-oriented management.

To enable the paradigm shift, garrison commanders are being provided significant instructions on Master Planning. During the Garrison Commander's Course, a two-hour master planning overview is provided, and the commanders also participate in a four-hour Collaborative Planning Exercise, where they actually work as teams in building an Area Development Plan. The OACSIM and USACE conduct this training, and in 2005 more than four sessions were provided.

Master Planning Training and Outreach: The Master Planning Course and the Installation Management Institute (IMI) serve as prime sources for enhanced master planning training to the Army planning community. The Master Planning Course, a 40-hour session, was given two times last year to around 80 students. Students received intensive training, both in working sessions and lectures, on the planning process from vision to implementation. It has been very successful. The Installation Management Institute supplements this formal training through a series of specific functional training related to master planning. Last year, more than 100 participated in the IMI Master Planning "track."

Planning Community of Practice: Our liaison with the American Planning Association (APA) and its Federal Planning Division has been very fruitful in promoting the planning profession. USACE sponsored an Army breakout session at the last Federal Planning Division Workshop in San Francisco, and also was invited to discuss the linkage between Army Master Planning and NEPA at the associated APA conference. The Federal Planning Division of APA acknowledged excellence in Army Master Planning by awarding the IMA Pacific Area Regional Office an award of excellence for the Hawaii Installation Design Guide.

Short-Range Stationing Efforts: OACSIM, IMA and USACE have been working hard with installations in defining

their short-range requirements to support the immediate BRAC and modularity initiatives. Our planning teams have been deployed to many of our Army installations to help conduct Facility Utilization Studies and Requirements Analyses, to assure a consistent definition of requirements has been made. The Army team has been working closely to transform these requirements into accurate programming documentation for immediate execution. Our challenges, however, remain in our haste to assure the installation's long-term 50-75 year carrying capacities are not compromised to immediacies.

Many of our installations are championing Master Planning updates. Fort Hood, Texas, Fort Bliss, Texas, and others have seen the need for visionary planning and are prioritizing their efforts to define a vision and framework of development that is forward in thinking, long-term in focus and creating legacy bases that will preserve these communities to meet all the planning needs of our nation for our next generation.

The future of Master Planning going into 2006 remains a challenge, but exciting. There will be more Master Planning Training, both with three sessions of the planning course scheduled in 2006, an expanded IMI master planning curriculum and a new advanced Master Course on collaborative Area Development Planning scheduled for summer 2006. Further, USACE will be sponsoring an Army Master Planning workshop in conjunction with the FPD workshop in San Antonio (as part of the APA).

However, there will be more challenges as we formulate the short-range plans for 2007-08 execution. We will be faced with doing more with fewer resources. The Army will need our planning expertise to make these massive restationing actions succeed. One way will be to work the Army team collaboratively to help solve these problems. USACE is forming Planning Assistance Teams that can come to installations for a short duration to help with planning needs. This is the type of solution we need to mature. ➤



Baltimore District project - Advanced Chemistry Laboratory dedicated

by Chris Augsburger

Among the United States' greatest concerns today is the potential for a chemical or biological terrorist attack. Following the events of Sept. 11, 2001, Congress recognized a critical need to design and construct a facility that would deal with the potential threats presented by the most dangerous chemicals on earth. As a result, they provided funds in 2002 for a \$46 million, state-of-the-art chemistry laboratory.

Authorized under the Chemical Weapons Convention, the Edgewood Chemical and Biological Center's Advanced Chemistry Laboratory will stand as the sole location in the United States allowed to produce chemical warfare agents for defensive purposes following the destruction of the U.S. chemical stockpile. The U.S. Army Corps of Engineers, Baltimore District, was tasked with managing the engineering, design and construction of the lab, which was dedicated on Oct. 7.

"Given the Corps' extensive experience with building highly technical laboratories, we were the right engineering organization to undertake and manage this very challenging and complex project," said Mike Pfarr, project manager for the laboratory.

"The Advanced Chemistry Laboratory is a cornerstone in our nation's response to the potential for chemical assault," he said.

Designed and constructed over 32 months, the 80,000-square-foot, highly specialized laboratory handles known and suspect chemical warfare agents, toxins and toxic industrial chemicals. The research undertaken at the laboratory works toward developing expertise in all phases of a



Designed and constructed over 32 months, the \$46 million, 80,000-square-foot, highly specialized Advanced Chemistry Laboratory will handle known and suspect chemical warfare agents, toxins and toxic industrial chemicals.

chemical agent's life cycle, embracing development, evaluation, production, neutralization and disposal.

To carry out this mission, the laboratory's design included state-of-the-art, custom-designed chemical hoods and ultra-efficient carbon filtration banks with extensive electrical back-up systems. Heating ventilation and air conditioning systems provide 100 percent conditioned make-up air, along with redundant exhaust fans. About 200,000 cubic feet of conditioned air passes through the lab ventilation system per minute.

The safety and environmental controls of the lab are critical to ensure that personnel and the environment are protected against lethal materials that are about 600 times more toxic than industrial chemicals. Lab capabilities include analytical chemistry, detection, filtration,

decontamination and evaluation of chemical agent technologies.

The Corps developed a complex design capable of accommodating the combination of technology, regulatory requirements and the internal flexibility to respond to the ever-changing nature of the chemical warfare threat that will occur over the life of the facility. ➤



Jim Turkel (left) and Mike Pfarr (right) tour the new laboratory, which will be the sole location in the United States allowed to produce chemical warfare agents for defensive purposes, following the destruction of the U.S. chemical stockpile. Baltimore District was tasked with managing the engineering, design and construction of the lab.

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However, while we see the crest of the wave coming toward us, we should not forget to balance workload with health and wellness. Over the year, the Army has lost several of its veteran/seasoned planners.

They were pillars of our planning community, and their untimely deaths were due to heart attacks and stress related illnesses. The Army critically needs our planning team to be well, and wellness means health and quality of life. In the upcoming year, while we see the crest of master planning

needs, the most important need for all of us is to assure we maintain proper balance in our work, health and family.

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The Corps also needed to obtain permits for storm water management, sediment and erosion control, and building emissions. The site had to be swept clear of unexploded ordnance, and the design had to accommodate force protection standards and an adjacent runway accident potential zone.

World-class fumes hoods, the centerpiece of this facility, will be certified to comply with strict ventilation standards to ensure the safety of the working scientists. Redundant engineering controls, stringent

security controls and use of specialty construction materials were necessary for safety and security code requirements.

The construction method used as much ingenuity as the complexity of the lab itself. In addition to important legal, budget, contracting and information management support, the project delivery team comprised laboratory and building design and construction specialists from the Corps, Edgewood Chemical and Biological Center and industry. These team members brought special knowledge of toxic material handling, lab design, hood and filtration design, and safety and surety requirements.

"This crucial project owes its success to the unique combination of expertise gathered on this team," Pfarr said.

The same sentiment was echoed by all partners involved, according to Baltimore District's Deputy District Engineer Lt. Col. J.T. Hand, who represented the district during the dedication ceremony.

"The level of partnership among the garrison, the customer, the Corps and the

contractor was what made this project successful," Hand said.

During the planning, design and construction of the facility, Pfarr said that many collaborative meetings occurred where scientists sat with equipment manufacturers to solve critical design elements of the exhaust filtration units and chemical fume hoods. Communication specialists sat with vendors to design proper voice and data systems. The contractors met with individual lab owners to customize labs to specialized needs.

Although the project delivery team faced a plethora of challenges throughout the process of building the laboratory, the team members pulled together through the many ups and downs inevitable in such a demanding project.

"The result is that our professional engineering organization delivered to the customer, on time and under budget, a world class, state-of-the-art laboratory that will serve the nation in peace and in war," Pfarr said.

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State-of-the-art, custom-designed chemical hoods and ultra-efficient carbon filtration banks are demonstrated. The safety and environmental control of the lab are critical to ensure that personnel and the environment are protected against lethal materials that are on the order of 600 times more toxic than industrial chemicals.

Upgraded sewer system started in suburb of Mosul, Iraq

by Claude D. McKinney

MOSUL, Iraq – By next spring, Al-Zharaa a suburb of Mosul, will have in place a below-ground pipe enclosed sewer system to replace the surface flow system operational today. The first 1.5 kilometers of trenches are being dug and pipe is pre-positioned to make this "modernization" a reality. This system will bring improved sanitation and health conditions to more than 700,000 residents of Mosul's 1.5 million population. Additionally, this project will stimulate the economy, bringing \$625,000 to the city in the form of worker salaries, supply requirements and other services associated with the construction project.

"This new sewer will go a long way toward improving the living conditions of the citizens of Mosul," said Lee Kenderdine, resident engineer for the Mosul office of the U.S. Army Corps of Engineers. "It is this type of reconstruction project that shows the common citizens of Iraq that a better life is coming." This type of major civic project is coordinated and directed in partnership with local Iraqi officials.

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Pre-positioned pipe and marked trench lines together with the trencher in position, are positive signs for local residents that a new sewer system will replace the open sewer also shown.



Corps Regional Teaming; a decades-old concept

by Bruce Hill Jr

The process to regionalize the Corps has become a focal point over the past couple of years, but no matter how you cut it, regional teaming has been around for decades.

In the past, Project Delivery Teams (PDTs) would perform some of the work outside their respective districts. PDT work on the regional level is more common these days. In fact, it's increasing and planned to continue to be on the rise throughout the Corps.

"Regional PDTs already exist and are working very well across the region," said Lt. Col. Todd Wang, commander for the U.S. Army Corps of Engineers Albuquerque (N.M.) District. "The focus of the current regional concept is so that any district can share ideas and workloads with other districts. Albuquerque District has been performing work on a regional basis for more than 70 years; other districts have perhaps even longer."

Seventy years ago, engineers and line workers from around the region came to build Conchas Dam in New Mexico. Twenty-five hundred people put in 10 million hours of work over a four-year period to build the dam that eventually helped form the Tucumcari District, now known as the Albuquerque District (or SPA). The construction of Conchas Dam would not only mark the beginning of a new district, but would become the first regional effort in SPA history.

Since 1935, SPA moved a couple of times, and would relocate to meet the needs of the work. Today, instead of moving offices and workers to the work, the Corps moves the work to the workers for better work force utilization, time management and reduced cost; all characteristics of PDT.

"This concept has worked extremely well, especially on some environmental projects," said Jorge Colberg, chief of military and Inter Agency Support (IAS), Project Management Branch.

"The current PDT for the contaminat-

'We are able to hold down costs to our customers by tapping into experts from throughout the region.'

—Lt. Col. Todd Wang

ed wood-treatment facility (a Corps team project being led by SPA near Port of Stockton in Stockton, Calif.), includes SPA, Seattle (NWS), Sacramento (SPK), and Mobile (SAM) spanning three divisions in coordination with U.S. Environmental Protection Agency (EPA) Region 9," said Monique Ostermann, U.S. Army Corps of Engineers-Albuquerque District PDT manager. SPA provides program management; NWS leads site characterizations and design efforts; SPK leads real estate, site cleanup, construction and maintenance activities; and SAM is doing Quality Control on real estate issues.

The U.S. Army Corps of Engineers districts have their own organizations for providing expert support services, e.g., construction, regulatory, eco-system restoration, etc., with their own program managers, management, administrative staff and line workers. Regional PDTs are formed depending on the scope of work, and will gather Corps workers and contractors from around the region that best meet the needs of the Corps and its customers based upon their expertise.

The PDT designed to assess and develop remediation strategies for the contaminated wood-treatment facility area is comprised of representatives chosen by the EPA from four Corps districts.

"The EPA came to SPA and SPK to help build a team for the (contaminated wood-treatment facility) project," Ostermann said. "SPA and SPK solicited résumés from around the Corps, and SPA

collected the résumés for the EPA to pick out the individuals they wanted for the team."

"I've been on this PDT for at least six years," said Tim Crummett, U.S. Army Corps of Engineers operations, maintenance and construction project manager. This is my first regional PDT though I've been on many at the district level throughout my eight-year career with the Corps.

"Communication is kind of hard (regional PDT) because you don't have as much face-to-face interaction as compared to working just at the district level," Crummett said. "But the great thing about the regional PDT is that you might not always have the resources you need to complete a project at the district level, so regionalizing is a reasonable alternative."

"The Albuquerque District realizes the limitations of being a smaller district with a very tight budget and inability to afford larger staffs, which is why we utilize the larger districts that might have key resources to offer," Wang said. "We are able to hold down costs to our customers by tapping into experts from throughout the region."

A concept of regionalization is to create a more functional corporate-like organization, which may lead to smoother internal processes and improved working relations with sponsors. Continued regionalization should also improve work force operations, expand efficiency and increase outsourcing across the region.

"Districts have operated as a region throughout the Corps for a long time, and have already completed many projects with regional assistance ahead of the current Corps regionalization plan," Wang said.

And it all began more than 70 years ago.

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PWD



Night Lighting Contamination

by Don Juhasz

There are few electrically powered devices today that waste as much of their generated product as many common outdoor lighting fixtures do. The night sky over most communities is aglow with wasted illumination from misdirected or overdone lighting. More often than not, lighting is generously applied to an area or subject, with little attention paid to containing light within the task area. The resulting light intrusion into areas outside the task area has created modern-day afflictions called Light Pollution and Light Trespass.

Security lighting... or insecurity lighting?

Lighting is often installed to deter or prevent crime. For site security, "maximum coverage" fixtures are typically used like dusk-to-dawn floodlights and unshielded wallpacks. The glare from such lighting causes extreme contrast and promotes low peripheral visibility, thereby defeating its purpose. Although static dusk-to-dawn lighting "feels" like a protective measure, it can actually assist criminals more than deter them. Major studies on security lighting's effect on deterring crime are at best inconclusive. (See footnotes).

So, what are the solutions?

Many of these problems associated with outdoor lighting can be solved by using a little common sense.

* Simply put, efficient use of energy in lighting is that which: (1) applies all or most of its generated light to the task at hand. (2) Uses no more light or energy than is necessary for safety in the task area. (3) Has controls that only have the light on when it is needed.

* In the security industry today, professionals will attest that if lighting is used to prevent theft, motion or infrared-sensored lighting would be more successful than static floodlighting. Since motion or infrared-sensored lighting creates an alerting "change of environment," it draws

attention to any activity at a site.

* We must increase awareness. The way to achieve better outdoor lighting is through education. To ignore these many problems and continue pandering to society's "perception" of good lighting is irresponsible.

* The physiology of the human eye must be taken into account when designing outdoor lighting. To best facilitate peripheral vision at night, "contrast" between light sources, lit areas and dark surroundings must be reduced. Softer, more transitional light levels, which are as consistent as possible from area to area, should be employed. (Recommended levels set by the IESNA should not be exceeded – see footnote). Also, fully-shielded/recessed light sources or "full cutoff" type (FCO) fixtures should be the prevailing choice in all outside installations. Such fixtures and light sources are available from most manufacturers.

* There is no excuse for glare, and it should be avoided in all applications. This is easily achieved by specifying fully-shielded/recessed light sources or FCO type fixtures. Any fixture that presents a viewable light source as part of its functional appearance is going to affect visual perception at night by varying degrees. Epitomizing the problem of outdoor glare is floodlighting. No matter how it is aimed, floodlighting always produces glare, even from extremely off-axis angles. The wide broadcast of light produced by floodlighting regularly affects neighboring areas, roadways and the night sky — even across large distances. Given its lack of redeeming qualities, floodlighting should ultimately become obsolete.

* Unnecessary and hazardous over-lighting, as in commercial "lumen wars" can be avoided by responsibly following guidelines for the maintained illumination levels and uniformity ratios recommended by the IESNA. Again, glare from these sites is avoided by specifying fully-shielded/recessed light sources or FCO type fixtures.

In summary

At this juncture, we must look at where we are and learn from our mistakes. Our goal for the future must be to balance the functional needs of lighting with the unchangeable givens of nature's design.

Five-hundred years ago, a Renaissance challenged convention and illuminated the world. In the next millennium, our challenge is to illuminate it wisely and only when needed.

Footnotes:

- "Preventing Crime, What Works, What Doesn't, What's Promising" A report to the United States Congress / The National Institute of Justice www.ncjrs.org/works/wholedoc.htm
- "Outdoor Parking Lot Lighting" Nancy Clanton and James Benya. An E Source Report. E Source, Inc. 1033 Walnut St. Boulder CO 80302-5114, www.esource.com
- "Study of Streetlighting and Crime" 7/77 by James M. Tien / US Dept. of Justice, www.darksky.org/ida/ida_2/info63.html
- "Light, Sight and Photobiology" Peter Boyce from Lighting Futures publication/Lighting Research Center, Rennselaer Polytechnic Institute. www.lrc.rpi.edu/Futures/LF-Photobiology/Index.html
- "Does Light Have a Dark Side" Janet Raloff, Science News Magazine, October 17, 1998 Science News, 1719 N St. N.W., Washington, DC 20036 www.sciserv.org
- Lighting Handbook, Illuminating Engineering Society of North America. 120 Wall St., Floor 17, NY NY 10005-4001 / 212-248-5000.

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Federal employees honored for saving \$14 million through energy efficiency

Energy Department receives Energy Saver Showcase Award for superior building performance and sustainable construction

WASHINGTON, D.C. – The U.S. Department of Energy (DOE) honored 20 federal government employees, teams and organizations on Oct. 27 for saving more than \$14 million in energy costs in the past year through energy efficiency improvements and innovative energy-saving strategies across the federal government. During the ceremony DOE received a special award for superior building performance and sustainable construction at its facilities.

Under Secretary of Energy David K. Garman presented the 2005 Federal Energy and Water Management Awards, which recognize efforts to save energy, reduce federal energy costs, promote a cleaner environment, accelerate technology transfer, strengthen our national security and create a stronger economy.

“President Bush has called on government agencies and individual Americans to improve energy efficiency,” Garman said. “These awards showcase the leading and important efforts of federal employees and prove that individual efforts can add up to big savings.”

In addition, Secretary of Energy Samuel W. Bodman announced that the first federal energy saving team is being deployed to a General Services Administration facility in Jamaica, N.Y., as part of the comprehensive national energy efficiency effort being undertaken by the Bush Administration. The team, made up of energy savings experts, will assess the facility's energy usage with the goal of not only improving efficiency, but also reducing energy costs. The White House also gave Presidential Awards for Leadership in Federal Energy Management at the ceremony. These awards honored five energy management teams from the Department of Defense and

the General Services Administration that saved more than \$9 million and enough energy to power 9,800 typical homes.

Energy Department award winners' accomplishments include:

- Upgrading heating, ventilation and air conditioning equipment, improving operations and maintenance practices, recommissioning energy systems and installing direct digital energy controls;
- Implementing innovative energy efficiency contracting mechanisms whereby private companies are paid only when energy savings are achieved; and
- Issuing contracts for the purchase of “green power” and installing renewable energy systems.

Selected from 100 nominations submitted by federal agencies, this year's awardees are employees from the U.S. Army, Air Force, Marine Corps and Navy; the Department of Interior and Veterans Affairs; the General Services Administration; and the Smithsonian Institution. Federal facilities at the Departments of Energy and Interior and NASA received Energy Saver Showcase Awards for superior building performance and sustainable construction.

Sponsored by DOE's Federal Energy Management Program (FEMP), these awards demonstrate a commitment to sound government stewardship of resources. For 24 years, FEMP and the Federal Interagency Policy Committee have chosen these award winners to recognize efforts to help agencies increase energy efficiency and the use of renewable energy. The federal government estimates that it has reduced its energy use in buildings by almost 26 percent since 1985.

The Energy Policy Act of 2005

requires the federal government to reduce its energy use by 2 percent each year and to purchase at least 7.5 percent of electricity from renewable energy sources by 2013.

This awards program is one of the many activities held each year during October, Energy Awareness Month, to highlight the critical importance of energy efficiency and renewable resources and federal efforts to lead by example in energy management.

The complete list of Federal Energy and Water Management Awards winners can be viewed at http://www.eere.energy.gov/femp/services/awards_fewm2005.cfm. For more information on how businesses and American families can save energy and lower energy costs, please visit www.energysavers.gov. **PWD**

CALL FOR ARTICLES

The March/April 2006 issue of the **Public Works Digest** will feature

Housing Issues

Please submit all articles to gregory.c.tsukalas@usace.army.mil

with POC (name, title, office) and author (name, phone, e-mail) information no later than **February 24, 2006.**



White House honors federal agency teams for saving energy and reducing energy costs

WASHINGTON, D.C. – The White House honored five energy management teams from the Department of Defense and the General Services Administration Oct. 27 for their dedication and leadership in the conservation and prudent management of energy in their facilities and operations. These teams, including 67 federal employees and contractors, are responsible for efforts that have resulted in estimated annual savings of more than \$9 million and 900 billion Btu in 2004 alone, equivalent to the energy used in 9,800 typical homes. Many of these energy conservation efforts will provide continued savings in the years to come.

The Presidential Awards for Leadership in Federal Energy Management, established by Executive Order 13123, recognize significant achievements that help the federal government lead by example in the area of energy efficiency and renewable energy use. Last month, President Bush highlighted the need for leadership with a directive that called on federal agencies to conserve energy, and in particular fuel, in light of tight energy markets after recent hurricanes. In addition, the recently enacted Energy Policy Act of 2005 expanded goals for energy efficiency and renewable energy use in the federal sector.

Recognized at the sixth annual ceremony were energy teams from the Army, Navy, Air Force and Marine Corps and the General Services Administration Great Lakes Region. The five winning teams of the 2005 Presidential Awards for Leadership in Federal Energy Management received awards for the following achievements:

**U.S. Department of Defense
Headquarters Pacific Air Forces Facility
Energy Conservation Program**
Alaska, Guam, Hawaii, Japan, Korea, Wake Island and Singapore

The program saved energy costs and reduced environmental impacts by executing a 10-year Energy Strategic Plan covering its 100 million square mile area of responsibility of 16 installations in the Pacific Region. A key component of the Energy Strategic Plan is its creative innovation in the use of new technologies, management practices and funding approaches, such as the deployment of resource efficiency managers and the inclusion of incentive clauses for energy conservation in contracts with the private sector. PACAF energy projects and initiatives yielded savings of 77.3 billion Btu and \$1.9 million in 2004.

**U.S. Department of Defense
U.S. Army Installation Management
Agency - Southeast Region**
Georgia, South Carolina, North Carolina, Alabama and Kentucky

The U.S. Army Installation Management Agency, Southeast Region (IMA-SER) instituted a comprehensive energy management program by teaming with 16 Army installations; the Department of Energy's Southeast Regional Office; U.S. Army Corps of Engineers, Huntsville; and DOE's Pacific Northwest National Laboratory. IMA-SER used alternative financing, facility energy audits, sustainable building design and off-grid generation to reduce energy consumption and utility costs in 2004 by 1.4 trillion Btu and \$23 million.

**General Services Administration
Great Lakes Region**
Chicago, Illinois

The Great Lakes Region implemented its 2004 energy conservation program, resulting in energy savings of more than 106 billion Btu and \$460,000 from the previous year. In terms of energy intensity, the region's buildings improved energy effi-

ciency by 7 percent compared with 2003. The region also purchased electricity generated from wind power for a 1.3 million square foot facility – part of a contract that will save \$60,000 over two years compared to purchasing conventional power from the local utility company.

**U.S. Department of Defense
Marine Corps Base Camp Pendleton**
Camp Pendleton, California

Camp Pendleton surpassed the federal government's mandated energy reduction goal of 35 percent by 2010 six years early, achieving a 44 percent reduction in 2004 compared to 1985 levels. Projects included upgrading heating and air conditioning units, installing high-efficiency lighting, and outfitting warehouses with natural daylighting systems. The biggest accomplishment was the final decommissioning of a large central steam plant, which alone reduced energy consumption by 93 billion Btu, enough to serve the energy needs of 1,300 typical homes in the region for more than a year.

**U.S. Department of Defense
Navy Region Southwest**
San Diego, California

As Commander, Navy Region Southwest, Rear Admiral (Ret.) Jose Luis Betancourt, Jr. challenged the 11 installations to cut their utility costs by 10 percent in 2004. The installations successfully met the challenge, implementing initiatives that saved nearly \$4.1 million in 2004, with another \$1 million in savings to accrue in 2005. Savings include reductions of approximately 47.8 billion Btu of steam and chilled water, 17.0 billion Btu of natural gas, 16.8 billion Btu of electricity and 40 million gallons of water in 2004. The Btu savings are equivalent to the energy used in more than 1,100 typical households in the region.

PWD



Centralized Barracks Management (CBM) Program

by Todd B. Hunter

Many Soldiers may ask what is Centralized Barracks Management (CBM) and how will it affect me as a Soldier?

CBM is not a new concept to the Army. Many installations worldwide provide barracks assignments to unaccompanied personnel through a centralized processing center managed by either a civilian or military work force.

The transfer of management of barracks to the garrison would immediately relieve units of housing assignment and termination responsibilities to free up military resources for mission functions. Single Soldiers would in-process the same as Soldiers with families for assignments and terminations, similar to Army Family Housing.

facilities and have better control of furniture inventory. Although commanders do maintain furnishings hand receipts, many have no plan or budget to systematically replace broken furniture, appliances or worn out mattresses. Newly arrived single Soldiers are routinely assigned to rooms that have not been properly cleaned and maintained during change of occupancy. Most units require additional resources or manpower to adequately manage their assigned barracks assets.

The Army leadership approved a Holistic Barracks Strategy to overhaul the entire permanent party barracks program to include changes in assignments, management, sustainment funding and to reinforce commitment to the modernization programs. The Army's emphasis on Unac-

4th Infantry Division at Fort Hood, Texas. Results of the pilot and the lessons learned will be considered for the worldwide implementation.

Focus of the CBM will be developed around the following concept:

- "Fenced" sustainment funding.
- Create an installation champion for barracks issues and improve overall accountability.
- Assign and terminate rooms with an effort to maintain a sense of unit integrity.
- Identify, track, order and plan requirements for sustainment maintenance and repair.
- Execute accountability of damage collection for non-fair, wear and tear.
- Control statements of non-availability issuance to maximize utilization.
- Perform central barracks furnishings management.

Soldiers have the right to live in decent, safe and sanitary housing and have quality maintenance repairs performed in a timely manner. The quality of a Soldier's "home" should match the quality of their service to our nation. The goal of quality of life for UPH is to create a residential community by promoting pride, professionalism and personal dignity. UPH should be simple, durable and functional. The program will allow us to take better care of America's most precious commodity, "The American Soldier."

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The quality of a Soldier's 'home' should match the quality of their service to our nation.

The current situation allows management of barracks to be performed by the military units, normally at the company and battalion level. Because of this, military manpower is expended to facilitate this process resulting in fewer Soldiers available for mission requirements.

Many leaders are unaware of minimum space and privacy standards when housing their single Soldiers, thus not assigning space to maximize utilization. Units also differ in their barracks management policy even at the same installation.

In an effort to maintain unit integrity, single Soldiers are often placed into housing where occupancy rates are more than 100 percent while nearby units have occupancy rates much lower.

CBM will allow commanders the ability to focus more on the mission, improve barracks maintenance, more efficiently use

accompanied Personnel Housing (UPH) as a quality of life issue, and its impact on readiness and retention, has driven the establishment of new standards and priorities. The Army is fully committed to increasing privacy and improving UPH as quickly as resources allow.

A plan is being developed for worldwide implementation for CBM and providing a focused funding stream for sustainment repairs. This is a key component of the Holistic Barracks Strategy. The secretary of the Army approved directing CBM and focused sustainment at an estimated cost of \$260 million per year starting in FY06.

To test the effectiveness of the concept on a large scale with warfighting/deployable units, the Office of the Assistant Chief of Staff for Installation Management (OACSIM) funded a pilot program for approximately 5,000 Soldiers of the



Corps of Engineers leads fight to recover from back-to-back hurricanes

Hurricane Katrina hurdled through New Orleans, Aug. 29, breaching levees and flooding 80 percent of the metropolitan area. Before the Corps could complete even temporary repairs and “dry” the city, Hurricane Rita swept through the Gulf Coast Sept. 23, re-flooding about 40 percent of the impacted area and causing even more extensive damage to the 350 miles of hurricane protection levees in New Orleans and southeast Louisiana, and Hurricane Wilma came ashore in Florida Oct. 24.

Corps of Engineers volunteers from across the nation are supporting the hurricane recovery efforts with data collecting, debris removal, structural assessments and restoration of critical utilities in the Gulf Coast region.

Volunteers from several federal agencies joined the Corps in supporting the Federal Emergency Management Agency. Corps employees are working closely with the Bureau of Reclamation, Environmental Protection Agency, U.S. Coast Guard and Army Materiel Command. In addition, Germany, Luxembourg and the Netherlands provided equipment and personnel to assist in hurricane recovery efforts.

Katrina - First Wave

The New Orleans District team in the warehouse bunker knew something was wrong even as initial news reported celebrations in the French Quarter and that New Orleans had gotten off easy. Reports started coming in early Aug. 29 about possible levee breaches and flooding in the city. Around 2 p.m. Col. Richard Wagenaar, district commander, and two others set out to investigate a possible breach in the 17th Street Canal.

"It took us about an hour-and-a-half to drive three miles because of all the debris, water and live wires," Wagenaar said. "We got to the I-10/610 split, and there were all these cars parked there, and that's when I just knew, 'This is huge. There's way too much water here.' I didn't know the city all that well, but I knew that rainwater didn't cause flooding like that."

Soon after, news coverage began capturing the greater New Orleans area – water gushing through the streets, crowds moving through water to high ground, and boats and helicopters rescuing stranded people. At the same time, district personnel on the ground and at the Tactical Operations Center in Vicksburg, Miss., were racing to orchestrate the necessary resources and materials to stem the flow of water. With verbal authorization, Corps contractors responded. Project managers hit the ground running, leading the fight against the nation's largest natural disaster.

First Battle - Attacking Breaches

Nonstop convoys of 20-ton trucks delivered sand, gravel and large rock to areas on the 17th Street Canal, where an access road was built to the breach. The road was forked from that location and built to reach the London Avenue Canal breach. Crews then turned their attention to building a road to Lakeshore Drive and a second breach area at Mirabeau Road. In mid-September, Corps contractors were building about 500 feet of roadway per day.

The next step at the 17th Street Canal, and later the London Avenue Canal, was to

cut off flow from Lake Pontchartrain. Contractors drove 150 feet of steel piling across the canal to seal it. Meanwhile, Army National Guard Chinook and Black Hawk helicopter crews began placing an average of 600 7,000-lb. sandbags each day into the breaches. One breach took more than 2,000 sandbags before engineers could see them under the water surface.

Depending on the helicopter's lift capability, riggers averaged one to three hookups every two minutes during daylight hours. Sandbagging operations ran 24 hours for 10 days. Fifteen hundred bags and even more rock were stockpiled to address future repairs. Crane barges also were used to place sandbags, 80-lb. stone and gravel, especially along breaches on the Inner Harbor Navigation Canal (IHNC) where ground access was non-existent. Expedient repairs were made to two breaches there.

On Sept. 10 the New Orleans District closed off a fourth critical breach along the IHNC. That success was cheered, but only for a moment as project leaders began focusing on new goals.

"We did everything we could do to bring in the right equipment, materials and resources to expedite these breach closures," Wagenaar said.

"I'm proud of these people. They've lost a lot. Some of them are without homes themselves, but they're putting their hearts into this mission and exceeding my expectations," he said. "I can't say enough about their dedication and determination."

Shift in Mission Focus - Unwatering

Though the mission of repairing pump stations and ordering and placing auxiliary pumps was ongoing, on Sept. 8 it became the primary focus. Wagenaar's goal was to have pumping begin as soon as the breaches were closed. Draining started at the 17th Street Canal Sept. 5, at the London location Sept. 10, and using mobile pumps, at other locations throughout the city. Barges and aircraft once again were used to haul equipment, pumps, generators and teams to sites.



The Corps has installed more than 60,000 temporary patches under FEMA's Blue Roof program. (Photo by Matt Craig, Memphis Commercial Appeal. Used with permission.)



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The Corps concentrated its portable pumps and generators at canal locations to support the draining by pumps in the southern areas of the water basins. As the water in canals leading to the pump stations receded, the Corps, contractors and Orleans Sewerage and Water Board authorities began to repair pumps that were under water or otherwise crippled by Hurricane Katrina. The local power company and engineers from the 249th (Prime Power) Engineer Battalion, Fort Belvoir, Va., also were working with authorities to provide electricity to specific pump-station grids. As canal waters receded and more electrical power was restored, more pump stations started working.

In the New Orleans area 148 pumps needed repair. As of midnight Sept. 11, 750 million gallons of water was being drained per day, the equivalent of an Olympic-sized swimming pool every seven seconds. However, this was only the tip of the iceberg for Col. Duane Gapinski, Rock Island District commander, and now commander of Task Force Unwatering. The total capacity with all pump stations running is about two Olympic pools per second.

Storm on the Horizon

With more than a month of hurricane season left, Gapinski, Wagenaar, 60 or so Corps employees, and hundreds of contractors were monitoring weather reports closely. Everything that could be done was being done. And then news of Hurricane Rita came.

When asked, Gapinski warned the public: "We're watching Rita's projected path and, depending on its strength and how much rain falls, everything could change."

Expedient sandbag and rock repairs took on even more urgency, and the 60-foot steel pilings that were placed at the end of 17th Street and London Avenue canals – and removed partly and temporarily to allow pumping once the breaches were closed – were once again hammered into place to prevent Lake Pontchartrain water from entering. The fear was that a storm surge would easily overtop the temporary

breach closures. Due to the size and depth of the IHNC, an expedient closure there was impossible.

About 24 hours after the closures, wind and rain began raising water levels along the Gulf Coast. On Sept. 24, Rita's storm surge rose to nearly eight feet and overtopped the IHNC on both the east and west sides of the canal. Wave action removed stone at the top of the temporary repairs and topped two breached areas that were between seven and eight feet elevation. The 9th Ward areas were flooded once again, though nominally in comparison to Katrina's floodwaters which reached 16 feet.



Residents can have their debris removed through the Corps' contractors by moving it to the street. (Photo by Mary Beth Hudson, USACE)

On the morning of Sept. 25, the Corps team once again began surveying damage and possible access routes for construction crews. On the IHNC west bank, large rock was trucked in to fill the scour hole behind the levee. Three- to 7,000-pound sandbags were placed atop the levee to stop the water flow and provide additional protection from future storm surge. The sandbags were also "capped" with crushed stone to help prevent seepage. On the east bank, 7,000-lb. sandbags were placed by helicopter. The Corps used up to 2,000 sandbags in the operation, which brought the temporary floodwalls up to a minimum of +10 elevation.

Levee Rehabilitation

Once the Corps had New Orleans and vicinity unwatered for the second time following floods from Hurricane Rita, a new team, Task Force Guardian, went to work making immediate repairs to damaged lev-

ees and floodwalls. The New Orleans hurricane protection system will be restored at full federal expense following a decision by the assistant secretary of the Army for Civil Works. This decision invokes the emergency authority of Public Law 84-99 (33 U.S.C. 701n) and provides for a coordinated effort in rebuilding hurricane, flood and storm damage reduction projects to the pre-storm conditions.

Under normal cost sharing, non-federal sponsors, which in this case are the levee boards for each parish, would be required to pay roughly \$249 million to repair these facilities. Because of the unprecedented damage and economic impact on local governments, the rehabilitation will be entirely funded by the federal government.

Task Force Guardian arrived in New Orleans Oct. 1 to begin further surveying to bring the levee systems back up to pre-Katrina standards. The Corps continues to prioritize work and collect ground-truth data via surveys and aerial recons.

"The restoration of the levee system will be done by New Orleans District project managers. Each project manager has been hand picked for their position. They are among the best and brightest who have a stake in providing the best flood protection for their family and neighbors," said Brig. Gen. Robert Crear, Mississippi Valley Division commander.

Levee System Evaluation

In early October the Corps initiated efforts to gather scientific data on damage to the levees and the federal hurricane protection system in the greater New Orleans area. The U.S. Army Engineer Research and Development Center (ERDC) is leading a Corps team to catalog data and to survey the system.

The Corps also is hosting three independent expert teams and all of the scientists/engineers will collect and share data. One team is comprised of volunteers from the American Society of Civil Engineers. The society routinely visits hurricane-impacted areas to gain lessons learned to apply in developing new criteria for infrastructure design. Another is a National Science Foundation team from the University of California – Berkeley that will



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seek information to apply to levee systems in its Central Valley area. In addition, a team from Louisiana State University is participating in the assessment.

The teams are identifying and collecting critical data needed to accurately portray the hurricane protection system's performance and are focused on capturing data that could be perishable. Data collected includes high water marks, debris lines and orientation, personal interviews, photographs, historic data on design and construction, operation and maintenance records, and other information.

Preliminary findings from the data collection teams are being used in current and longer term hurricane protection work around New Orleans. The Corps is using this information in its ongoing work to provide immediate protection for the city and will also consider the lessons learned in bringing the system back up to pre-Katrina levels by June 2006. Future protection levels for the city have not been determined. Increasing beyond the previous Category 3 level would require additional study and Congressional approval.

FEMA Blue Roof Program

To help affected residents return to their homes and avoid further water damage to the interior, FEMA has commissioned Operation Blue Roof programs in Texas, Louisiana, Mississippi and Florida. The Corps manages this effort for FEMA, providing service centers, inspectors and contracting support.

Home owners who sustained damage to their roofs can request to either have a contractor install patching with blue plastic sheeting or to obtain tarps that they can install themselves. If a contractor will do the work, the owner signs a Right of Entry form to allow the Corps inspectors and contract personnel onto their property. The plastic blue roofs are placed by nailing into temporary furring strips. The material can last up to a year, depending on weather conditions, providing a temporary fix until residents can settle insurance claims and schedule a permanent repair. Trained Corps volunteers inspect the damage

before the blue roof is installed and again after the blue roof is installed.

As of the end of October, 84,728 Right of Entry forms had been collected. The total number of blue roofs installed to date was 60,442.

Debris Removal and Disposal

The three hurricanes produced a staggering volume of refuse just in terms of what they left in the path of destruction, including some 300,000 ruined vehicles in New Orleans alone. Added to that will be the construction/demolition (C/D) waste that will be generated by an estimated 150,000 houses and other buildings throughout the impacted areas that will have to be demolished. Also in support of FEMA, the Corps contracted via competitive bidding with four companies to clean up debris left by hurricanes Katrina and Rita. Each fixed-price contract is for up to \$500 million with the option to increase by another \$500 million if necessary. To date



Debris that may contain hazardous substances, such as refrigerants, are separated from the rest of the waste. (Photo by Mary Beth Hudson, USACE)

contractors have removed 7,106,176 cubic yards of debris from Katrina and Rita.

A major issue is how to dispose of all this waste. Working with the Environmental Protection Agency, Louisiana Department of Environmental Quality, local governments and other stakeholders, the Corps is looking at alternatives to landfilling and burning. One very desirable option would be to salvage and reuse some of the C/D waste, and ERDC is supporting a proposed project to evaluate these opportunities. The goal would be to divert usable building materials from destroyed structures to serve local economic development and rebuilding in the areas affected

by Katrina and Rita. This project would involve building deconstruction and materials recovery for reuse and recycling to be used in repairs, stabilizing and sealing, temporary construction and rebuilding. Building material recovery centers would be established in conjunction with multiple regional Habitat for Humanity ReStores and other designated building material reuse centers.

Recovering just 5 percent of the total lumber materials from the approximately 150,000 homes estimated to require demolition as a result of Katrina alone is enough to build 11,550 wood-framed houses at 2,000 square feet each. This is equivalent to 160 million board feet valued at \$32 million (pre-Katrina reused lumber values of 20 cents/BF) – that could be recovered using very conservative recovery rate estimates. Other reusable building materials, including fixtures, windows, doors and brick also retain tremendous reuse value. Recovering the wood and other undamaged building materials also will reduce environmental impacts and eliminate costs associated with demolition and disposal.

The conservative estimate of labor (this type of work has been accomplished across the United States using Americorps and other volunteer labor sources) to recover these materials from some 30,000 houses (20 percent of the total estimated to be destroyed) would create 29,087 full-time jobs for one full year at the higher levels of whole-building deconstruction. If only 1,000 persons were dedicated full-time to this task, this would result in the salvage of 200 houses per week.

In comparison, demolishing one single-family home requires about one day with a two-person crew using heavy equipment burning diesel fuel. To demolish and dispose of 30,000 houses will create only 232 full-time jobs for one year while burying \$32 million of building materials.

This article was compiled from Corps news releases, with contributions from Susan Jackson at the New Orleans District, U.S. Army Corps of Engineers; Tom Napier and Dana Finney at Construction Engineering Research Laboratory; and from Brad Guy, President, Building Materials Reuse Association. PWD



EPA revises Resource Conservation Recovery Act Headworks Exemption for wastewater

The Environmental Protection Agency on Oct. 4 modified the definition of hazardous waste with respect to wastewaters in a final rule entitled, "Wastewater Treatment Exemptions for Hazardous Waste Mixtures," 70 Federal Register 57769. Effective federally on Nov. 3, but not effective in Resource Conservation and Recovery Act (RCRA) authorized states unless adopted, this rule adds exemptions from the definition of hazardous waste for wastewater, the discharge of which is subject to regulation under section 402 or 307(b) of the Clean Water Act. This is known as the "Headworks Exemption" and is codified in 40 CFR 261.3(a)(2)(iv). The exemption is not limited only to publicly owned treatment works, but may also benefit Federally Owned Treatment Works (FOTWs).

Four modifications to the Headworks Exemptions are made by this rule.

- Two F005 spent solvents, benzene and 2-ethoxyethanol, are made eligible for a wastewater exemption. As a condition of the exemption, benzene must be treated in an aerated biological wastewater treatment system and with only lined surface impoundments or tanks prior to secondary clarification. Benzene is added to the group of solvents exempt, provided they are not present in the wastewater above the 1 ppm weekly average standard specified in the rule. 2-Ethoxyethanol is added to the group of solvents exempt, provided they are not present in the wastewater above the 25 ppm weekly average standard specified in the rule.
- The wastewater exemption is expanded to include scrubber waters solely derived from the combustion of any of the exempted solvents. These solvents are benzene, carbon tetrachloride; tetrachloroethylene; trichloroethylene; methylene chloride; 1,1,1-trichloroethane; chlorobenzene; o-dichlorobenzene; cresols; cresylic acid; nitrobenzene; toluene; methyl ethyl ketone; carbon disulfide; isobutanol; pyridine; spent chlorofluorocarbon solvents; and 2-ethoxyethanol.

See the rule for concentration restrictions and means of measuring.

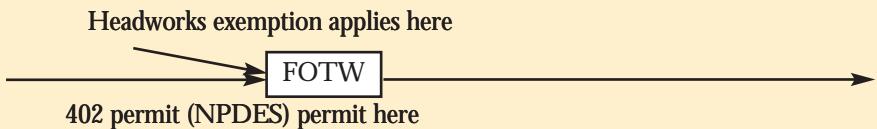
- This rule expands options for demonstrating compliance with concentration restrictions under the wastewater exemption. At facilities subject to Clean Air Act regulations or subject to an enforceable limit in a federal operating permit that minimizes fugitive air emissions, the rule allows direct measurement of solvent concentrations at the headworks of the wastewater treatment system rather than a mass balance calculation. To be eligible for the measurement approach, a facility

must prepare a site-specific sampling and analysis plan and obtain confirmation that the state or EPA received the plan.

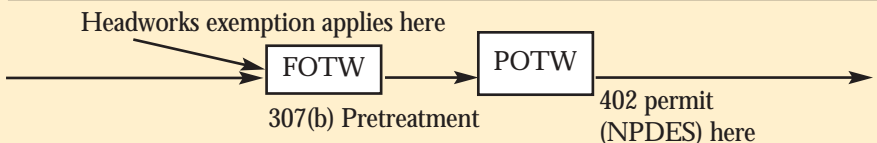
- This rule expands the exemption for "de minimis" losses to wastewater. De minimis losses are "inadvertent releases to a wastewater treatment system, including those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well

Examples of application of the exemption for various FOTW scenarios are illustrated as follows:

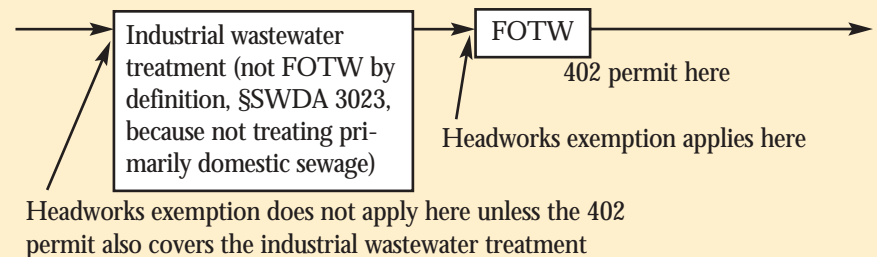
Scenario 1: FOTW direct discharges under NPDES (402) permit. Headworks exemption applies at headworks entering the FOTW.



Scenario 2: FOTW discharges to POTW in compliance with 307(b) pretreatment standards, and POTW subsequently discharges under NPDES (402) permit. The headworks exemption applies at headworks entering FOTW.



Scenario 3: Federal industrial wastewater treatment plant discharges to an FOTW, and the FOTW subsequently discharges under an NPDES (402) permit. The headworks exemption would apply at the entry to the FOTW (as in Scenario 1), but may not cover discharge entering the industrial wastewater treatment unit unless the NPDES permit also covers the industrial wastewater treatment system.





Johnson urges team building as he departs IMA

by Ned Christensen

WASHINGTON, D.C. – The Installation Management Agency (IMA) said farewell in an Oct. 6 ceremony to outgoing director, Maj. Gen. Ronald L. Johnson, as he leaves IMA to take over as deputy chief of engineers and deputy commanding general of the U.S. Army Corps of Engineers.

Johnson, who thought of himself as the IMA quarterback, “passed the football” to IMA Principal Deputy Director Philip E. Sakowitz in the Arlington, Va., ceremony hosted by Lt. Gen. David W. Barno, assistant chief of staff for installation management. Sakowitz served as acting director until Maj. Gen. Michael D. Rochelle assumed the post in late October.

Johnson assumed the directorship of IMA Aug. 9, 2004, and leaves following a year that saw dramatic growth and promise for the future of IMA, despite being filled with the turbulence of changing times and sustaining an Army at war.

“Ron Johnson probably had the toughest two-star job in our Army during his 14 months here in IMA,” Barno said. “If you look at what we’ve asked him to do, leading 78,000 people across 110-plus installations, scattered literally across the globe, with increasing missions and decreasing people – that’s about as tough as sledding as you can get and he has done that magnificently well.

“We’ve got more folks under ... this organization than we have in just about any corps-level fighting force in the Army. That’s remarkable and the breadth and scope of your responsibilities is immense,” Barno continued.

The Army’s Principal Deputy Assistant Secretary for Installations and Environment

Geoffrey D. Prosch talked about the short, but eventful, history of transforming installation management, the many responsibilities installations have, and enumerated the many IMA accomplishments of Johnson’s tenure.

“There’s no way we could have ‘moted’ and ‘demoted’ 300,000 Soldiers in the last two or three years without IMA,” Prosch commented. “There’s no way we could have cross-leveled all these critical parts through the CIF (Central Issue Facility).

“The 101st (Airborne Division) Air Assault division deployed to Iraq with the body armor of the 25th Infantry Division. In the old days we never would have had visibility of that,” Prosch observed.

Prosch also attributed to IMA the promise of 90 percent funding for installations, the development of common standards for installation services, and the creation of the Installation Management Board of Directors, which brings the Army senior leadership together twice a year to discuss installation issues.

“This is hard – this is really hard,” Johnson said as he took the podium for his parting remarks. He spoke of the exhilaration of looking forward to a new assignment, but also of regret at work undone due to being called away early in his term. As he often has, Johnson used the framework of a true story to sum up the importance of what IMA does.

He told the story of Spec. Micheaux Sanders who deployed to Iraq as a new



Outgoing Installation Management Agency Director Maj. Gen. Ronald L. Johnson, right, receives the IMA Stalwart Award from Principal Deputy and Acting Director Philip E. Sakowitz. The Stalwart Award recognizes the highest level of commitment to the IMA mission.

recruit in 2003 and distinguished himself when his tank unit responded to an Iraqi insurgent attack on a cavalry patrol. Sanders received the Silver Star for exposing himself to enemy attack, shooting until he ran out of ammunition and throwing rocks after that, despite being wounded in the shoulder. Johnson said Sanders, when asked why he fought so hard, replied that he fought to uphold the warrior ethos and because he wasn’t distracted by concerns for his family back home on an Army post.

“Why? Because he knew that you, all of us, the Army’s city mayors, were taking care of business,” Johnson said. “Remember, we support all the Spec. Sanders and all of the Soldiers around the world. If that doesn’t motivate you – if you’re not thinking about how you contribute to that Sol- ➤

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maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing.” Previously the de minimis exemption was limited to

P and U listed waste from manufacturing facilities. The new rule expands the exemption to all types of listed waste (F, K, P, and U) and to both manufacturing and non-manufacturing facilities. To claim the exemption, discharge of wastewaters must either have been eliminated or hazardous constituents must have been identified in the facility Clean

Water Act permit application or to the pretreatment control authority.

For questions regarding this Federal Register and RCRA issues, contact Beverly VanCleaf at (402) 697-2559, Beverly.D.VanCleaf@USACE.Army.mil or for Clean Water Act Questions, contact Ed Bave at (402) 697-2634, Edwin.B.Bave@USACE.Army.mil. PWD



Office of the Assistant Chief of Staff for Installation Management Facilities Policy Division leadership changes

by Mike Ostrom and Kelly Dilks

FY05 was a very busy year within the Facilities Policy Division at the Office of the Assistant Chief of Staff for Installation Management (OACSIM). A flurry of activity regarding project approvals for relocatable buildings and energy projects involved the division throughout the year. New team chiefs for both the Facilities Engineering Branch and Utilities Privatization and Energy Branch were appointed, filling vacancies left by the retirements of Satish Sharma (FY04), and Bryan Nix (FY05).

Don Juhasz joined OACSIM last January to lead the Utilities Privatization and Energy Team after Sharma's retirement. His first challenge in the new job was developing the Department of Army Energy Strategy for Installations. The Department of Army Energy Strategy for Installations was signed July 8 by the Hon-

orable Francis Harvey, secretary of the Army, and Gen. Peter Schoomaker, chief of staff of the Army. Information regarding the Army Energy Strategy for Installations is available at <http://www.hqda.army.mil>, and in the September/October 2005 edition of the *Public Works Digest*.

On Sept. 30, Bryan Nix retired after 35 years of service as both an Air Force officer and Department of Army civilian. Nix joined the OACSIM in 1993 as the branch chief for the Facilities Engineering Branch within the Facilities Policy Division of the Facilities and Housing Directorate. His expertise in the areas of work classification, lead and asbestos abatement, and relocatable building projects, to name but a few, will be sorely missed.

Vince Kam was selected in September as the new branch chief for the Facilities Engineering Branch, filling the position Nix vacated. Many are familiar with Kam's efforts in the Plans and Operations Division at OACSIM and for his leadership in the Army Installation Design Standards process. In addition to his duties as branch chief, Kam is



Bryan Nix, center, receives a commendation from Robert Sperberg, left, Facilities Policy Division chief, and Michael Ostrom, right, deputy chief, Facilities Policy Division, for his years of federal service upon his retirement.

responsible for AR 420-70, Buildings and Structures, and AR 420-10, Management of Installation Directorates of Public Works.

POCs are Mike Ostrom, (703) 602-3443, e-mail: Michael.ostrom@hqda.army.mil and Kelly M. Dilks, (217) 373-6756, e-mail: Kelly.M.Dilks@erdc.usace.army.mil.

Mike Ostrom is the deputy in the Facility Policy Division at OACSIM. Kelly M. Dilks is a researcher at the Engineer Research and Development Center - Construction Engineering Research Laboratory. **PWD**



Don Juhasz



Vince Kam

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dier's ability to fight, then I encourage you to start doing so right now."

Johnson was a tireless advocate for IMA's mission of improving Soldiers' well-being by standardizing the services on installations. He often cited the examples of corporate giants Home Depot and McDonald's, who meet customer expectations by offering the same predictable look and products everywhere in the world they

are located, while still accounting for the variations made necessary by demographics or geography.

He was particularly passionate about Common Levels of Support, which for the first time quantifies the cost of running installations and shows what happens when funding lags. He credited CLS with providing the solid data to sell the Army leadership on funding installations to 90 percent of required funding levels. At the same time, he decided to hold implemen-

tation back a year to make sure it was right when fully deployed. And he actively pushed business process redesign and the Lean Six Sigma model to find efficiencies and improve processes.

Johnson compared the February 2005 decision to fund installations at 90 percent of base operations and 90 percent of facility maintenance and sustainment requirements to the Army College Fund in terms of significance to sustaining Army recruiting and retention. ➤



IMA Southwest Region Office women are doing their parts for America

by Ron Joy

FORT SAM HOUSTON, Texas – Throughout history, American women have served and continue to serve with distinction, no matter what the crisis or situation.

Several women who work for the Installation Management Agency's (IMA's) Southwest Region Office (SWRO) are volunteering to serve, but this time they are going into harm's way right alongside their male counterparts. Prime examples of this non-traditional change are Lynda Austin-Reed, Leslie Christopoulos and Anne Ferguson.

Austin-Reed headed to the sand dunes and deserts of Iraq, Christopoulos went to Afghanistan, and Ferguson just returned to San Antonio from a yearlong assignment in the Balkans.

What all the women have in common is their desire to do their part for the United States, the U.S. Army and the American Soldier.

Lynda Austin-Reed

Lynda Austin-Reed is one of the original members of the task force for Installation Management Agency's Southwest Region that began operations in May 2002. She didn't have to drive a long distance to join the SWRO team as she was already working at Fort Sam Houston, Texas, (where SWRO is located) for the garrison's Public Works Directorate.



Lynda Austin-Reed looks over her calendar just days before she deploys to Iraq.

However, after more than three years working within the walls of SWRO, the now chief of Budget Integration was looking for something that might challenge her both professionally and personally. Maybe even an adventure.

That challenge and adventure is coming true in the form of a six-month deployment working for the U.S. Army's Corps of Engineers in Iraq.

Austin-Reed left her familiar confines of San Antonio in mid-November (2005) and headed for a journey of a lifetime working as a program manager in the Anaconda area of Iraq. Her Iraq position will be overseeing engineering programs by ensur-

ing they are funded correctly and on track.

While this job is out of the normal lane for this mother of three sons and grandmother of two girls, she believes it's important that she become personally involved in what is happening in Iraq.

She also believes it is a way for her to grow as a professional and as a person.

"I need to do what I can to help," Austin-Reed said. "We have sent a lot of young people to Iraq, and they deserve our support. By taking this assignment, I feel like I'm helping keep a young man or woman out of harm's way. I know this is going to challenge my normal way of life and I look forward to the experience!"

Is this feisty money expert worried about going into an unsafe part of the world?

"I'm not worried at all," she answered. "I drive on I-35 every day. The decision to volunteer for reassignment was not made lightly, but was a decision that felt right. It still does."

Leslie Christopoulos

Leslie Christopoulos joined the SWRO team more than two years ago as an environmental protection specialist; however, she is the executive officer to the IMA SWR director.

Christopoulos has been around the military all her life, not living in one place for more than five-and-a-half years. As the daughter of an Air Force F-4 Vietnam- ➤

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"The wellbeing and quality of life that you (the IMA work force) deliver in enhancing the facilities where our Soldiers live, work and play will be the edge that sustains this world-class, all-volunteer Army. It is your work alone that will cause other Americans to answer their call to duty," Johnson said, echoing the theme of the Association of the United States Army convention that concluded the day before

the departure ceremony.

"90-90 (funding for installations) is a huge decision and I encourage each and every one of you to use the very best judgment and professionalism in figuring out how to deliver to our people the very best without wasting a single dime," Johnson said. "I'm encouraged by what we've done and I'm even more inspired by what you have yet to do.

"This is not really about Ron Johnson,

this ceremony here today. It is indeed about the great service of a wonderful organization," Johnson said. "It is my belief that at some time in the future – someone in the very near future as we look back at what we've done here with IMA, someone will say that this was the single most important decision that the Army made – to stand up this organization.

Ned Christensen is a public affairs specialist in the IMA Public Affairs Office. PWD



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Leslie Christopoulos is hard at work as she prepares for her assignment to Afghanistan. (Photo by Ron Joy)

era fighter pilot, she has seen the faces of young men and women heading into harm's way.

"I remember what happened during Vietnam," she said. "That's why I want to make sure our Soldiers going to Iraq or Afghanistan don't have the same problems we faced when I was growing up. I know what it's like to have someone you care about serving in a dangerous place."

"When I watched these kids getting on busses and airplanes headed to Iraq and Afghanistan, I knew that I had to do something about it. If my being there will prevent one young person from going, then I'm going to do it," Christopoulos said with sincerity.

The petite professional left for a year-long tour in Afghanistan in early December. She chose this time of the year in an effort that a Soldier might be able to return home and be with his or her family during the holidays. Christopoulos believes very strongly in family values and her eyes and face show her personal feelings come from the heart and from someone who has been there in the past.

Christopoulos isn't sure what job she will be doing or where exactly she is going to be in Afghanistan. To her, it doesn't really matter. She does know that she will be working as a project manager for the U.S. Army Corps of Engineers. She is

excited and ready for the adventure that awaits her and not at all worried about going to a place that still isn't totally safe.

One thing Christopoulos said that was similar to Rosie the Riveter was "getting out of the traditional role as housewife" in the 1940s, the American women going into those countries today are facing major cultural challenges. Yet Christopoulos is anxious to do her part as a member of the Department of the Army civilian work force.

Anne Ferguson

During the summer of 2004, Anne Ferguson was busy working as the SWRO lead safety specialist, a job she really enjoyed. However, something was missing. She didn't have the opportunity to work directly with Soldiers anymore, and it bothered her not doing "hands-on" and "in the field" work. In her position at SWRO, most of the people she works with are DA civilians.

Then Ferguson saw an opportunity in a government announcement she could not resist. DA was looking for a safety and occupational health specialist at Camp Bondsteel near the small town of Ferizaj/Urosevac, Kosovo. With the blessing of her husband, Barry, Ferguson jumped at the chance of working in Kosovo



Anne Ferguson, who is a Department of the Army civilian, wears a military uniform while at work in Kosovo.

to make a difference.

This isn't the first time Ferguson has been deployed. In 1996 she was sent to Hungary for four months, and then two years later she found herself working in Israel. This was in between temporary duty assignments to the Balkans and other areas of Europe while working for the U.S. Army, Europe.

Before Ferguson left for Kosovo in early October 2004, she set three goals to accomplish while she was gone.

The first was personal. She wanted to lose weight and get herself into better shape. Goal one was accomplished by losing 10 plus pounds, working out at the gym every morning, and walking the 2.76 miles around the perimeter of the base three times a week.

The second goal was financial. By working in what is still considered a hostile environment (she had to wear military clothing and protective gear when she left the camp), she received financial incentives. She was able to use this extra money to pay off bills so she could have a clean slate for her future retirement. Another goal accomplished.

The final goal was to work with the Soldiers again. Ferguson found this goal the most exciting of all three. "Being in Kosovo was extremely rewarding because you had a chance to see your work come to fruition right before your eyes," she said. "One of the most important things I can say about my year in Kosovo is that we didn't have any fatalities."

While Kosovo is still considered a dangerous area of the world, somewhat normal life goes on within the Camp Bondsteel fence. They have a movie theater, television (four stations), Armed Forces Network radio, a food court, sightseeing trips to historic places such as the Church of the Black Madonna (where it is said Mother Teresa got her calling), good food in the dining facilities 24-hours a day, visiting post exchanges from other NATO countries, entertainment from the United Services Organization and local entertainers of all ages.

At Camp Bondsteel, Ferguson lived for the year in what is called a SEAhut. A SEAhut is a wooden building with usu- ➤



Fort Bliss Fire and Emergency Services selected as the DoD Fire Department of the Year

The Defense Department's Best Fire Department for 2004 is the Fort Bliss, Texas, Fire and Emergency Services Department. The announcement was made at the DoD Awards Banquet at the 2005 DoD Fire and Emergency Services Training Conference, in Denver, Colo., Aug. 16.

Located at the premier Army Strategic Mobility Platform and Air Defense Artillery Training Area, the Fort Bliss Fire and Emergency Services Department serves a community of 128,000 Soldiers, family members and civilian personnel who live, work and train under their protection. The members of the department responded to more than 3,000 emergency incidents during 2004, with only a minimal fire loss. Protecting the health and wellbeing of the fire fighting staff is "job one," and their implementation of a comprehensive Fire Department Occupational Safety and Health program, which has a 94 percent NFPA 1500 compliance rate, is proof of

this effort. One hundred percent of the department's firefighters are Emergency Medical Technician (EMT) certified, and Advanced Life Support (ALS) services are provided from every fire engine company, enhancing installation Pre-Hospital Emergency Medical Services.

Fire Chief Billy Cannedy accepted the award on behalf of his department from Joseph Whitaker, the deputy assistant secretary of the Army for installations and housing.

This is the second consecutive year that an Army Fire and Emergency Services Department has been selected as DoD's



Fort Bliss Fire Chief Billy Bob Cannedy, center, receives the DoD Fire Department of the Year award from Joseph W. Whitaker, second from left, deputy assistant secretary of the Army (Installations and Housing). Fort Bliss Garrison Commander Col. Robert T. Burns, left, and Assistant Fire Chiefs Ramon Ortega Jr. and Roberto Olmos were also on hand to represent the garrison.

best. Fort Bragg, N.C., captured the award for its outstanding work during 2003.

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ally 10 rooms and shared a common bathroom and shower area. The somewhat barren rooms came equipped with only a bed, wall locker, a table, a chair and a small refrigerator. Anything else you might want you had to furnish yourself. So to make things homey, she bought a television, rugs and other comfort items from people who were returning to their homes.

Trips to the Kosovo countryside were few and far between. However, Ferguson did have a chance to meet many of the local nationals. "Kosovo is a very beautiful country and the people there are well educated, pleasant and very polite," she said.

Ferguson says the experience was a good one and if her husband and dog were allowed to join her there, she would have stayed longer.

"There are some DA civilians who



Camp Bondsteel, Kosovo in the winter. The buildings are called SEAhuts which normally have 10 living areas for civilians working in the region.

have family members living at American facilities in Germany who have worked in Kosovo since the late 1990s," she said.

While each of the three SWRO

women gave or will be giving of themselves, they also are proving women of today are strong. Strong in their beliefs; strong in their abilities; strong in their desires to help; have strong and giving hearts; and hold strong American values.

Much like the women throughout our American history, these professionals are making a difference regardless of their backgrounds. These are American Heroes!

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