

Public Works

Digest

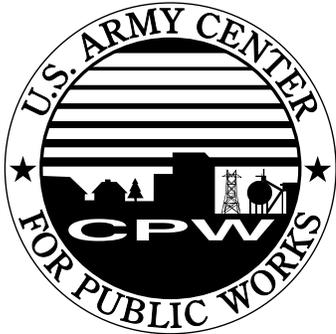
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In This Issue...

Installation Master Planning & Real Property Management





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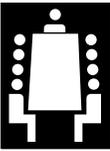
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Meeting the challenge at Fort Eustis

by Richard H. Brown



Demolition of World War II wood building at Fort Story, a sub-installation of Fort Eustis. (Photo by Richard Brown)

In recent years, the Fort Eustis DPW's Planning and Property Office has dealt with such challenges as MCA funding shortfalls, a drop in staff from twelve to five employees, and a tough decision to demolish 367 maintenance-intensive Wherry family housing units.

But they've provided continuous support to the unique mission of the only Army post with its own port, airfield and railhead operations — as well as a sub-installation, Fort Story.

Fort Eustis is the home of the U.S. Army Transportation Center, and Fort Story is located at the tip of nearby Cape Henry, fronting both the Chesapeake Bay and the Atlantic Ocean.

Like many Army installations, Fort Eustis faced a shortfall of MCA funds from fiscal years 1990-1997, according to Randy Brown, Team Leader for the Planning and Property Office.

Starting in fiscal year 1997, Fort Eustis will see long-planned construction projects become reality, to include:

- A Child Development Center.
- A 1,200-man barracks.
- A 1,000-man Reserve Center.

Learning to do more with less has also been a major challenge, but the fact that planning and real property are in the same office and on the same team has worked to their advantage, according to Brown.

"Without this cooperation, we would have a great deal of difficulty accomplishing our mission," Brown said.

"It is extremely vital for the real property and planning people to talk to one another," said Rufus Byrd, the Real Property Officer for Fort Eustis. "That is the success story at Fort Eustis, that the master planner and the real property officer work as one unit."

Combining planning and real property also makes it easier to keep track of what is being programmed, versus what is already on the books, according to Byrd.

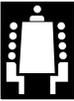
But according to COL Brian J. Ohlinger, the DPW, another "great

productivity enhancer" for both master planning and real property came to Fort Eustis in the person of Geographic Information Systems (GIS) Manager Becki Bew.

GIS—the management and manipulation of spatial and non-spatial data—combines computer graphics that represent features like buildings, utilities and roads, and add intelligence to the maps. Data for GIS comes from such sources as historic maps, as-built drawings, first-hand observations and studies. Then GIS links this data to computer-generated maps, said Bew. For master planners and real property managers, the resulting GIS maps are a one-stop way of doing the kind of research that once involved sifting through file cabinets and museum archives.

According to Brown, this one-stop research tool is indispensable for a staff trying to do more with less.

"With master planning and real property staffs depleted, GIS is essen-



tial,” said Ohlinger. “We’ll have both Forts Eustis and Story on GIS by around February, for a cost of \$300,000.”

Bew herself sits in an office surrounded by old maps and high-tech computers. She points to four large turn-of-the-century maps of Fort Eustis, and compares them to the new map she has made with combined information from the old maps.

“The impact of seeing this map on paper is unbelievable,” Bew says. The map is constructed from aerial photos, using something called digital orthophotography, with computer graphics overlaid on the photos.

“We’re now learning to measure our data in a different way, but it’s the same data we measured before. But your maps are only as good as the data you receive. You have to make people feel they have a part in updating the map.

“You have to sell them on the product,” Bew added. “Once you get people involved, then they’ve bought a piece of it.”

But even high-tech mappers must go out into the field and see for themselves, because they know they can never rely totally on other people’s measurements and observations.

“If you go out there, you know what’s going on; if you stay in the office, you don’t,” Bew said. “That’s how you find out that people have put up things without approval.”

According to Rufus Byrd, finding out what’s going on out there and keeping inventories up to date is an enormous challenge.

Once the Real Property people had enough staff to go out and gather this data themselves. These days they have to get most of this information from project officers — and that project officer may work for a contractor, the Corps of Engineers or even another part of the DPW.

“If we don’t keep track of what we have, we’re going to end up with excess facilities that we can’t afford,” said Byrd. “If the left hand doesn’t know what the right hand is doing, the commander can’t see the big picture well enough to make intelligent spending and planning decisions.”

For example, the Planning and Property people would like to demolish the post’s World War II wood buildings and replace them with new facilities, but Department of the Army has no money to give Fort Eustis and its tenants for this kind of construction. Instead, people keep putting “Band-Aids” on these old buildings, because they need the space.

But the demolition numbers at Fort Eustis are pretty impressive:

- For fiscal year 1994, 100,093 square feet — mostly World War II wood.
- For fiscal year 1995, 106,715 square feet — mostly Wherry family housing, but also World War II wood.
- For fiscal year 1996, 424,849 square feet — mostly Wherry family housing, but also World War II wood.

Older maintenance-intensive buildings can be a serious problem in a time of scarcer and scarcer operations and maintenance dollars.

According to Ohlinger, this became a critical issue when he realized that 40 percent of his budget was being spent on 25 percent of the post’s housing units.

And the density of the smaller 367 Wherry family housing units was too high for the land, on a post that had a desperate need for four-bedroom units.

“So we bit the bullet and tore them down,” Ohlinger said. “Somehow we knew we had to replace the housing, but we didn’t know how we were going to do it.”

But when Department of the Army nominated Fort Eustis and six other installations to participate in a family housing privatization idea called Capital Ventures Initiative (CVI), Ohlinger saw a way to get 200 new three- and four-bedroom units built on the site of the old Wherry units.

Under CVI, the developer builds, owns and collects rent for the housing units. Since the housing would be privately owned, the soldier would continue to receive BAQ. This would be a cost-neutral situation for the soldier, whose rent would be limited to the amount of BAQ received. The soldier would pay the monthly rent by allotment.

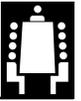
“But what soldiers are getting is 1996 housing,” Ohlinger said. “For us here at Fort Eustis, it’s a quality of life issue.”

Privatization of utilities is another option for reducing the amount of infrastructure the post must spend scarce O&M dollars on.



The U.S. Army Transportation Center at Fort Eustis trains soldiers to conduct boat and rail operations. (Photos by Richard Brown)





According to Ohlinger, the Hampton Roads Sanitation District has agreed to take over the post's sewage treatment plant sometime in the next year and a half.

"I'm optimistic we'll be able to make this happen," Ohlinger said. The current plant is located near the water, because the post sewage system is gravity-fed and converges at the low-lying plant. This is about as far as you can get from the front gate, were the Sanitation District's lines are, but a project is under design to put pipe in the ground and pump the sewage from the existing plant to the gate, in order to connect with the public utility.

Gas line privatization has already been accomplished at Fort Eustis, and is being done at Fort Story. About 70 percent of Fort Eustis is on the privatized natural gas lines, and eventually the entire post will be.

Fort Eustis also does joint planning with surrounding communities like the nearby city of Newport News, according to Brown. Recently, Newport News approached Fort Eustis about building a police pistol range on post. Eventually, the city would fund the construction of a joint pistol firing



Geographic Information Systems Manager Becki Bew studies a GIS map made from aerial photos and computer-generated graphics. (Photo by Richard Brown)

range on Fort Eustis.

Newport News and Fort Eustis have also planned a brackish water outfall project on post to help meet future drinking water needs of the peninsula.

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Richard H. Brown is a public affairs specialist in the DPW Liaison Office.

Real Property Planning and Management Steering Committee meets

How does the Army address issues like those related to uniform determination of TDY student barracks requirements, the metrication of the existing real property inventory, standard gross to net space conversion rules, calculation of Reserve Component Annual Training facility requirements — and much more? The focal point for these questions is the Real Property Planning and Management Steering Committee (RPPMSC), one of the most important subcommittees under the Army's Business Practices Committee.

In recent years, much of the RPPMSC's business has been done through video teleconferences and small task groups, but last 17-18 September, the entire committee met face to face for

the first time in two years in Tyson's Corner, Virginia, right outside the Capital Beltway.

The MACOM and installation representatives first received a fast-paced update on the long list of programs that affect their work. The opening presentations were followed by several issue sessions. In order to give these fuller attention, the Committee broke into separate sub-groups for master planning and real property management.

Collectively, they reviewed over 50 outstanding community issues, including metrication (converting to the metric system), professional certification of real property managers, barracks capacity reporting rules, and the uniform application of business process rules across the many applications used to

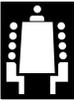
manage installations.

Some of these had a solution identified, but many others will require additional work. The issues were prioritized and assigned to members for action. Some of these will be worked on at later meetings, scheduled for January 1997.

Both the issue lists and the minutes are available on the DDS and the CPW web site. Subsequent task group reports will also be posted, as the groups convene to complete actions. Progress and completed actions will also be reported in VISIONS, the electronic Real Property and Master Planning newsletter.

☎ POC is Fredrik W. Wiant, CECPW-FP, (703) 428-6086 DSN 328.

PWD



As the chief of CPW's Planning and Real Property Division, Jerry Zekert comes well prepared. Armed with a Bachelor of Architecture and a Bachelor of Science in Civil Engineering from Virginia Polytechnic Institute (Virginia Tech), he is ready to do battle for quality installations. He has been working in the master planning area since 1980, when he got his first job in the Master Planning Branch at Fort Bragg.

"At Fort Bragg and later Fort Eustis," said Jerry, "I got involved in some great planning and programming initiatives, including managing over \$75 million in construction. We oversaw community planning projects such as coordinating additional water distribution services with the city of Virginia Beach and Fort Story and alternative access routes off Fort Eustis with the city of Newport News. We also worked with major force modernization fielding initiatives such as the Apache and other transportation-related equipment."

In 1989, Jerry came to the Center to work in the newly established Planning Branch, and today, he leads CPW's master planning and real property team. He attributes his success to good mentors, good training, hard work and great team members.

"Over the years, I learned a lot from my managers, including the basic supervisory skills, various leadership styles and how to empower others to achieve the best. But the Army Management Staff College (AMSC) was the best training I ever had in the Army, and I would highly recommend it to all civilians who have any aspirations about career progression. It relates the Army mission to your role as part of the Army team."

"For example, right after I finished AMSC, I served on the Army Community of Excellence (ACOE) team," explained Jerry. "Now I could truly appreciate the great effort the Army people put into providing quality services and facilities for our soldiers. This experience taught me that quality is an attitude and not a resource issue. This means you really don't need a lot of money to provide quality services. Since then, I have held to the rule that the real key to quality lies in sound master planning and real property management because they set the goals and objectives that the community buys into to achieve excellence in the services and facilities they provide."

"During the ACOE tours, I was and remain much more impressed with the smaller installations with little or no money because they use innovative techniques that combine ingenuity with skills available on post. They are living proof

Jerry Zekert Planning and Real Property Division



(Photo by Richard Brown.)

that management techniques can be worth more than money."

Today, Jerry is still concentrating on enhancing real property management support to the Army and improving the quality of the real property inventory. His division members have already established an installation real property validation survey program to do inventory field checks on a reimbursable basis. They also helped the USA Reserves assume real property accountability with the new real property module and provided on-site assistance to 10 regional support commands.

"We provide functional and systems training onsite, with help from our Fort Lee Systems and Development Team, to improve the accuracy of the installation database," said

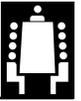
Jerry. "Our goal is to get installation personnel on post to take pride in ownership of their own real property data. We also focus on enhanced training opportunities through the Real Property PROSPECT course, for which we are the proponent. Last year, we trained 80 professionals, and this year, we've scheduled two classes—one in Seattle and one in Baltimore."

According to Jerry, using the Installation Status Report has greatly improved real property accuracy. "It's like looking at the data with a second pair of eyes," he said.

Some of the division's new initiatives include a more comprehensive planning and partnership with the local community. "Installations are no longer islands but neighbors with a surrounding city or town," said Jerry. "We're working with the American Planning Association (APA) to enhance the dialogue between city planners and installation planners. We plan to share our successes at the APA Conference in San Diego in April 1997. Last year, we were very proud when APA cited four Army installations (Forts Monroe, Knox, Leonard Wood, and Campbell) for the quality of their master planning."

"We're also promoting the use of state-of-the-art technologies, including the fielding of CADD/GIS, and teaching installations how to get the most from RPLANS. We have improved our automation tools with a new IFS Real Property Module, which will allow us to use WINDOWS-based technology and enhanced query capabilities as well as 'embedded training' or the use of software within software. This will enable us to do a better and faster job with CADD/GIS.

"As the Army changes, combat readiness support becomes more essential. Our aim is to provide the framework from which our unit commanders can train, deploy, and fight to win. I think we're doing this by supporting



The role of Master Planning and Real Property during reengineering and downsizing

by Jerry Zekert

As we approach the new millennium, DPWs are faced with new challenges, changing paradigms and innovative ways of doing business.

What worked yesterday might not work to support the changing Army of today.

Resources are being refocused, staffs reduced. As we look at cutting costs, we look at reducing overhead. What's the role of Master Planning and Real Property in this era of reengineering and downsizing?

When we downsize or reengineer an organization like a DPW, what are our objectives? What is the mission we are supporting? How are we accomplishing it?

In the DPW, typical missions are to:

- Provide quality real property maintenance and operation support for installation infrastructure.
- Ensure the installation complies with environmental laws, policies and procedures necessary to meet the National Environmental and Protection Act (NEPA).
- Provide overall master planning and real property support that provides the installation the developmental land use framework to fully meet its long-term missions.

These missions are not separate, but tiered by importance. Master Planning and Real Property management sets the

stage. The process identifies the strategy for the installation to meet the real property requirements needed to support the overall Army mission. It identifies the means, investment strategy, and goals and objectives to meet the mission.

These plans meet the environmental requirements set forth by NEPA.

Therefore, in an ideal world, a Real Property Master Plan with an accurate real property inventory ensures the installation complies with NEPA. From this plan, the resources and investments are defined and executed. The plan tells us what we need to do and identifies the means to accomplish it. The plan identifies the strategy that the installation should follow to provide quality maintenance and operations support to the community.

Real Property Planning and Management give solutions to installations that will help DPWs maintain their bases' infrastructure. They identify the most critical issues for communities to resolve and a framework for prioritizing their efforts, as well as provide a focus and consistent community vision. In that respect, they are not resource and manpower constrained.

Real Property Planning and Management can also be critical sources for identifying innovative ways to resolve real property shortfalls. Real Property

and Master Planning professionals provide the installation communities solutions "out of the box" that can meet many installation needs. For example, does the installation have much excess land or many excess facilities? Your Master Planning and Real Property professionals can develop strategies for out-leasing the property for a fee, and the rent is recouped to the installation's RPMA accounts.

How about checking what's available off-post? Master Planning and Real Property professionals can work with the local community. They can also work on innovative real estate actions such as providing available facilities and/or services to meet installation needs. And they can propose innovative solutions in the allocation of space on the installation that will help free out space for new missions. Further, consolidation can also empty out excess temporary buildings, dispose of them, and thus reduce maintenance costs.

Reengineering and downsizing can be stressful times for any organization. The tendency is to make short-term cuts in overhead and planning functions "because we have to survive." That is the wrong paradigm. Real Property Planning and Management are needed now more than ever. If you do not have a direction to follow as well as a baseline of what real property you have, how can you make sound decisions?

Real Property Planning and Management can provide essential value-added expertise to any DPW organization or installation that is struggling with downsizing and reorganization. Use them as your "ace in the hole" to successfully complete your reengineering and downsizing efforts. They CAN help you.

POC is Jerry Zekert, CECPW-FP, (703) 428-6139 DSN 328. **PWD**

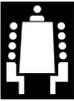
Jerry Zekert is the chief of CPW's Planning and Real Property Division.

(continued from page 4)

our range and training lands through CADD/GIS and sound real property management and master planning. We're assessing force modernization initiatives and producing the support facility annex which helps installations to better plan for real property to support new weapons systems. We're also promoting the development of accurate classification of real property, namely category codes, to appropriately describe the Army's range and training land assets."

"Our challenge is to provide many avenues of installation support so that the DPW has a one-stop place for all his sources for quality master planning and real property support," concluded Jerry. "We're trying to leverage total USACE installation support capabilities to focus this effort."

Jerry enjoys college football and is an ardent fan of the Virginia Tech team, which went to the Sugar Bowl last year. He is also interested in gardening. You may reach him at (703) 428-6139 DSN 328. **PWD**



Real property management and planning assure quality facilities

by Greg Brewer

Installations are the Army's power projection platforms—tangible evidence of our resolve to support our national security.

High installation quality standards, both in facilities available and services offered, reflect our commitment to be the best. Strategic and long-range planning are the basis for meeting this high quality.

We need **planning** to assure that excellent facilities are available at the right time, in the correct location and in the proper quantity. This involves a team effort of the real property and master planning professionals at the installation. This team can prepare and maintain the Real Property Master Plan (RPMP), the foundation document for developing and managing the installation's land, facilities and infrastructure.

An important management tool, the RPMP:

- Links mission to real property and evaluates mission facility support requirements and alternatives for resolving deficiencies and excesses.
- Reflects the commander's vision of how to achieve and maintain high quality real property standards.
- Provides the framework for analyzing and justifying maintenance and repair resource allocations and for justifying all major real property acquisitions.
- Helps ensure the efficient assignment, utilization, and disposal of real property assets.

The RPMP is a living document. It changes as mission or unit assignments in the Army Stationing Installation Plan change. Facilities requirements are determined by the installation's population and are reflected in the Tabulation of Existing and Required Facilities Report of the RPMP. The Tabulation of Existing and Required Facilities Report can be produced by the Real Property Planning and Analysis System (RPLANS) saving DPW manhours or contract dollars.

The Capital Investment Strategy component of the RPMP translates requirements into alternative strategies for satisfying those requirements. However, it need only address the ac-

tions the installation commander is committed to, and not all facility category groups or category codes. It should review facility conversions, renovations, leasing, off-post capabilities for partnering, privatization, other nearby installation or federal facilities, and new construction.

The Capital Investment Strategy need be only as complicated as required to document the decision path and what interim steps need to be considered. As the foundation upon which the DPW Resource Management Plan and Annual Work Plan are developed, the Capital Investment Strategy acts as a check and balance against poor allocation of resources.

The Long-Range Component of the RPMP also provides valuable information for DPW operations. This component contains:

- Special studies done on installation systems such as utilities and transportation.
- Basic installation and environmental maps and data which support installation operations and facilities or land carrying capacity analyses. This information allows for informed project sitings, improved fa-

ilities utilization and disposition decisions, and enhanced environmental stewardship.

- Natural and cultural resource data necessary to protect such assets.

The RPMP provides a wealth of information, but is only as good as the real property data supporting it. It depicts real property inventory data and uses it for requirements analyses. To be useful as a decision tool for real property management, the inventory must be accurate.

Using the RPMP and real property inventory, the real property manager can graphically display assignment of facilities to units and the relationship of unit assignments. He can plot the facilities available for reassignment or disposal, as well as justify retention and expenditure of resources on facilities.

Through its links to real property inventory data, the RPMP becomes an important decision support tool. It reflects requirements by linking condition data, historical and outstanding maintenance and repair data, design data and current use data. With the use of Geographic Information Systems technology, this data can be mapped visually, depicting data and trends for decision making. This information, in conjunction with the Capital Investment Strategy information, can be used to prepare the Resource Management Plan and Annual Work Plan.

The RPMP is one of the most important tools of the garrison commander for managing an installation. It provides much of the necessary data for the daily operations of installation activities by the garrison commander's staff.

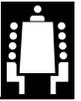
However, preparing and maintaining the RPMP documents and supporting databases is time consuming and costly. A solution is Geographic Information Systems technology, which:

- Provides a key to cost reductions and possible manpower savings in installation operations through the timely sharing of data installation-wide.

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If not, give Linda Holbert a call at (703) 428-7931 DSN 328.





- Provides the capabilities to maintain the RPMP and installation base map information economically.
- Provides automated accessing of facility as-built drawings and information for designer and real property manager use.
- Allows the graphical display of real property and environmental information on overlays so that the impacts of decisions can be easily seen.

The mapping of tabular real property data will make utilization and trend

analyses easier. With the linking of data bases over an installation LAN, Geographic Information Systems provide the perfect tool for the daily operations of installation business by all elements of the garrison staff. Availability of data is improved and duplication of data bases can be eliminated. Geographic Information Systems are truly planning tools for the garrison commander and his staff.

Quality installations are immediately recognizable by the pride soldiers and civilians take in them. They reflect a

maximum return on investment of scarce resources. They provide excellent facilities and demonstrate stewardship of the environment for future generations. They are the products of commanders who have translated vision into good planning.

☛ POC is Greg Brewer, DAIM-MD, (703) 693-4583 DSN 223. **PWD**

Greg Brewer works on installation planning issues in the Plans and Operations Division of the OACSIM.

CPW PROFILE by Alexandra K. Stakhiv

Julie Jones grew up on a farm just three miles away from the entrance to Fort McCoy. While still in high school, she began working on the installation, never dreaming that this was the start of a twenty-year career.

In 1995, Julie completed a degree in business as part of an outreach program sponsored by Fort McCoy. She attended evening classes on post and graduated from Lakeland College in Sheboygan, Wisconsin, after only four and half years.

“Last summer, I decided to take a developmental assignment with CPW in the Real Property and Master Planning Division of the Facilities Management Directorate,” said Julie. “I had reached the peak in my field at Fort McCoy and there were so many more opportunities here. I really felt I could help the Army more by working at CPW.”

Nevertheless, it was quite a culture shock coming to the Washington, D.C., area from Sparta, a town with a population of 7,500 and only three traffic lights to worry about. “I paid \$325 a month for a four-bedroom, two-and-a-half-bath house, which sat on almost one acre,” sighed Julie.

She is used to a lot of hard work, since her duties at Fort McCoy were not commensurate with her low mortgage. “I was responsible for the Reserve sites in a six-state area, performing professional realty and facility management for the installation and Reserve Command,” said Julie. “However, once Fort McCoy lost its Reserve function, a large part of my job went with it.”

But working with CPW real property personnel is not new to Julie. For the last two years, she has been involved

Julie Jones Planning and Real Property Division



(Photo by Richard Brown.)

with various CPW working groups, including working as an instructor for the real property Reserve training course conducted in Seattle, Washington. She also worked on the team involved in developing System Change Package 09, which covered the new real property category codes.

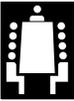
During her developmental assignment this summer, Julie performed the logistical work for CPW’s assistance teams visiting the Reserve sites. She also ran a hotline for the MACOMs, losing installations, gaining Regional Support Commands, Assistant Chief of Staff for Installation Management (ACSIM), Office of the Chief, Army Reserve (OCAR), and the Reserve Command; handled disputes on installations; and managed the schedule for the transfers.

“I acted as a mediator between the Reserves and the MACOMs on a variety of concerns about the transfer,” said Julie.

“I also did the general orders signed by the Secretary of the Army, which officially transfer property from the installation to the Regional Support Command. We’re finishing up now, and I’ll be helping to validate the real property database and checking that the properties were transferred to the correct MACOMs.”

Julie was recently permanently reassigned to CPW, where she will remain in the Real Property and Master Planning Division. Enthusiastic about her new job and new location, she is looking forward to furnishing technical assistance and guidance to the MACOMs and installations for real property accountability. You may reach her at (703) 428-7475 DSN 328. **PWD**

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Army Reserves get real property accountability

The US Army Reserves are the newest players in Real Property Accountability. Ten Regional Support Commands (RSCs) accepted Real Property Accountability for Army Reserve property not on active Army installations. They are:

- 63rd RSC – Los Alamitos, CA
- 77th RSC – Ft. Totten, NY
- 81st RSC – Birmingham, AL
- 88th RSC – Ft. Snelling, MN
- 89th RSC – Wichita, KS
- 90th RSC – Little Rock, AK
- 94th RSC – Ft. Devens, MA
- 96th RSC – Ft. Douglas, UT
- 99th RSC – Oakdale, PA
- 124th RSC – Ft. Lawton, WA

Real Property Accountability for three active installations (Fort McCoy, Fort Pickett, and Devens Reserve Forces Training Area) was also transferred to the Reserves.

The CPW Planning and Real Property Division was tasked to complete the transfer action to the ten Regional Support Command sites. CPW's Elaine Sims was the project manager and Alexis Wathen was responsible for the training. Julie Jones from Fort McCoy (See profile on p. 7) performed a two-month Developmental Assignment at CPW to assist with the logistical work of the Reserve transfer. She also prepared the rough drafts of the general orders.

Two Real Property positions were assigned to each RSC and most of them

have been filled. The ten Regional Support Commands attended a week-long Real Property Management Seminar in April 1996 at Fort Lawton, Washington. They also took part in a two-day Real Property Management Module Standalone training course at Fort Lee prior to receiving their database.

Once the Regional Support Command signed the DD Form 1354 accepting Real Property Accountability, the losing installation transferred the Real Property files to the gaining Regional Support Command. After Real Property Accountability was transferred, a Transfer Assistance Team, consisting of a representative from CPW's Real Property Management Team (Elaine Sims, Alexis Wathen, or Wiley Jernigan) and a representative from US Army Reserve Command (Shirley Smith, Doug Benson, Bill Roberts, or MAJ Booze), visited the Regional Support Command to assist in validating the database. The aggressive transfer assistance visit schedule was accomplished from 8 July to 16 September.

There were five MACOMs involved in the Reserve transfer with the US Army Reserve Command as the gaining MACOM. The four losing MACOMs transferred 968 Reserve installations —

FORSCOM, 613 installations; TRADOC, 311 installations; MEDCOM, 24 installations; and MDW, 20 installations.

The Regional Support Commands received Real Property Accountability from the following installations:

- 63rd RSC – Ft. Lewis, WA and Ft. Huachuca, AZ
- 77th RSC – Ft. Drum, NY, Ft. Hamilton, NY, and Ft. Dix, NJ
- 81st RSC – Ft. Rucker, AL, Ft. McClellan, AL, Ft. Stewart, GA, Ft. Benning, GA, Ft. Knox, KY, Ft. Campbell, KY, Ft. Bragg, NC, and Ft. Jackson, SC
- 88th RSC – Ft. McCoy, WI, Ft. Knox, KY, Ft. Leonard Wood, MO, and Ft. Ben Harrison, IN
- 89th RSC – Ft. McCoy, WI, Ft. Riley, KS, and Ft. Leonard Wood, MO
- 90th RSC – Ft. Sill, OK, Ft. Polk, LA, Ft. Carson, CO, Ft. Hood, TX, Ft. Sam Houston, TX and Ft. Bliss, TX
- 94th RSC – Devens Reserve Forces Training Area
- 96th RSC – Ft. Carson, CO
- 99th RSC – Ft. Meade, MD, Ft. Ritchie, MD, Ft. Indiantown Gap, IN, Kelly Support, PA, Ft. Pickett, VA, Ft. Belvoir, VA, and Ft. Eustis, VA
- 124th RSC – Ft. Lewis, WA and Ft. Carson, CO.

CPW's Work Management Team assisted the losing installations in cleaning out the transferred property by making them non-reportable or deleting them (depending on each installation's needs) out of their database. They also assisted CPW's Real Property Management Team in doing the quality assurance check to make sure the transferred installations weren't being reported in two different primary installation databases and that they were being reported by the right MACOM.

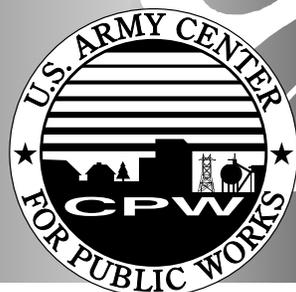
The Real Property Management Team would like to thank all those who supported and assisted in accomplishing the Reserve transfer. A lot of teamwork went into this effort — we couldn't have done it without you!

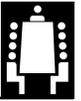
POC is Julie L. Jones, CECPW-FP, (703) 428-7475 DSN 328. **PWD**

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RPLANS—the next generation

by Stu Grayson

RPLANS, The Real Property Planning and Analysis System is now seven years old. That's old for computer systems, which generally last about eight years. But, it's been an active seven years.

RPLANS came on the scene just at the start of BRAC (Base Realignment and Closure) and is now a veteran of the BRAC wars. RPLANS and its companion HQRPLANS were the Army's main force in BRAC and gave the Army analytical capabilities that no other service possessed. As a result, the impact on Army installations was far lighter than it could have been.

In recent years, RPLANS has entered a new era, supplying "Quantity" calculations for the Installation Status Report. The first part of the Installation Status Report (Infrastructure) took allowances, requirements and facility evaluation out of the sometimes murky depths of the Directorate of Public Works and dropped it on the installation commander's desk. Suddenly, everyone from the installation commander to the Chief of Staff of the Army was asking facility questions. This attention is changing the way the Army manages (and funds) its infrastructure.

That's great, but what's coming next? The answer is the next generation of RPLANS. So far, there's no name change. It is referred to as RPLANS redesign or RPLANS rewrite.

The new RPLANS will be fielded in 1997 and will bring the system up-to-date, hardware- and software-wise. The new RPLANS will run on a server allowing multiple users. It will also be in the Windows environment.

Some of the systems that RPLANS draws data from will also run on the same server. These include the Army Stationing and Installation Plan (ASIP), The Facility Planning Support system (FPS) and the Army Criteria Tracking System (ACTS). The new system will have all the convenience of Windows and will incorporate several features which have been long requested by field users.

One of the important features will be the ability to send installation-generated requirements to HQRPLANS (available in December 1996). Now only requirements submitted in the Installation Status Report get to HQRPLANS. After this cycle, RPLANS installations will be able to import requirements from RPLANS to the Installation Status Report and will not be able to input requirements directly into it.

The next generation of RPLANS will begin deploying as early as March 1997, depending on hardware tests scheduled for November 1996. Current RPLANS installations, less BRAC closures, will receive the new system. Additional RPLANS locations may be added at the discretion of the MA-COMs.

The bad news is that new RPLANS sites may have to fund their own equipment. We will try to keep you updated on any changes as they occur.

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Stu Grayson works in the Planning and Real Property Division of CPW's Directorate of Facilities Management.

Army Criteria Tracking System—hard ACTS to follow

by Stu Grayson

How many planners, programmers, managers or just plain folks have wondered how the Army decides who gets what in terms of facilities? The process is quite complicated, involving the proponents for various types of facilities and often individual studies on specific category codes, which may take months or years.

What facilities do you think the engineers have proponency for? It's a trick question! The answer is not much, only utilities systems and fire stations.

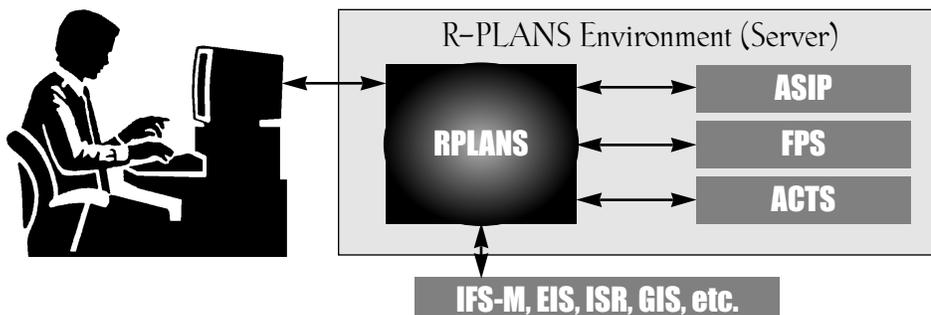
However, there is a simple answer to where you can go to find these criteria after they have been developed. It's called ACTS (Army Criteria Tracking System). ACTS is the official repository of criteria data for the Army, and all calculations for Army facility allowances are based on ACTS. ACTS is used by both the Facilities Planning Support system (FPS) and the Real Property Planning and Analysis System (RPLANS).

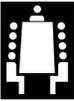
To use ACTS, the user must have access to the system. Right now, that is through the PAX system, but in the near future, ACTS will be available through the INTERNET. At the same time, ACTS is being redesigned from a text file, which is searched by scrolling through the category codes to find the right one, to a hypertext media which will allow the user to search the database by category code, facility category group, category description or other key words.

In addition to these changes, ACTS will be accessible through the installation RPLANS (new version to be deployed in 1997) system and will run on the same server. Remember, ACTS can help you get your act together when it comes to criteria.

POC is Stu Grayson, CECPW-FP, (703) 428-6506 DSN 328. **PWID**

R-PLANS — The Next Generation





Is that all the allowance I get?

by Stu Grayson

Sounds like something your kids would say? However, it's something planners, DPWs and even installation commanders are saying more and more lately, and it's a very important part of the master planners game plan.

First of all, what is an ALLOWANCE in planning language? The answer is simple. It's a mathematical number obtained by multiplying a force structure number (people, helicopters, tanks) times a criteria.

I'll use a simplified version of the allowance for administrative space as an example. Administrative space is based on the population of people who have administrative-type jobs (by MOS or civilian specialty). This number times 162 Gross Square Feet (GSF) is what is allowed for that installation. If you have 1000 people requiring administrative space, you will be allowed 162,000 GSF.

Most algorithms are not that simple, of course, but we have a tool that does the arithmetic for us. It's called RPLANS.

Now that we've figured out what an allowance is, what do we do with it? A lot of folks get upset at this point, because the allowance says you don't really need the commander's pet MCA project.

Before you get out the tar and feathers, let's look at the second half of the equation. It's called a REQUIREMENT.

All the computational power in the world can't account for the peculiarities of individual installations, so installations are allowed to adjust their ALLOWANCE into a REQUIREMENT.

How do you determine a requirement and why? Let's look at why first. In the administrative space example, many of our administrative buildings were originally built for other purposes, (warehouses, factories, barracks, and stables come to mind) and are not very efficient administrative buildings. Therefore, we can use various tools to help us calculate how much space we really need. There are both commercial- and government-owned CADD/GIS tools, as well as space utilization surveys, measuring net square footage and other tools which will allow us to calculate the true capability of our buildings. This information can then be entered in RPLANS and the Installation Status Report as a REQUIREMENT.

Last year this only went to HQR-PLANS if you put it in your Installation Status Report. Starting in December 1996, you will be able to send an update from installation RPLANS to HQRPLANS.

What happens next? Well, first a report is generated and sent to your MACOM. This flags all cases where the requirement is either greater or less than the allowance by a specified percentage. The percentage depends on the facility category group, but is either 25 percent or 10 percent.

The following facility category groups were treated as critical in handling the 1996 Installation Status Report (ISR) requirements edits and were subjected to a 10 percent screen (all the rest are 25 percent):

- F14182 Brigade HQ
- F14183 Battalion HQ
- F14185 Company HQ
- F17119 Unit Classroom
- F17120 General Instruction Building
- F17131 Compact Item Instruction
- F17132 General Item Instruction
- F17133 Vehicle Maintenance Instruction
- F17134 Aircraft Maintenance Instruction
- F17135 Laboratory Instruction
- F17136 Automation Aided Instruction
- F17137 Material Handling Instruction
- F17138 Limited Use Instruction
- F21110 Aircraft Maintenance Facilities
- F21410 Vehicle Maintenance Shops
- F21800 DOL/Procured Item and Equipment Maintenance

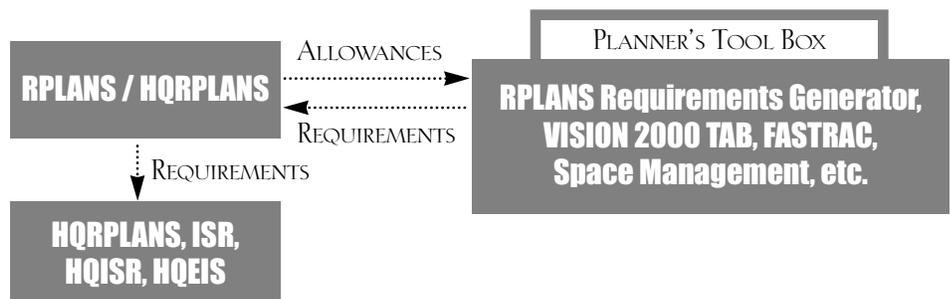
- F21885 Vehicle Maintenance DOL/DEH/DPW
- F21900 Installation Maintenance and Repair Facilities
- F42100 Depot Ammunition Storage
- F42200 Installation Ammunition Storage
- F44210 Enclosed Storage, Installation
- F44228 Hazardous Storage, Installation
- F44230 Humidity Controlled Storage, Installation
- F60000 Administrative Facilities
- F71100/F Family Housing (F7110F, UM FA used in ISR)
- F72100/P Enlisted UPH (F7210P, UM PN used in ISR)
- F72114/P AT/MOB Barracks (F7211P, UM PN used in ISR)
- F72170/P SR NCO UPH (F7217P, UM PN used in ISR)
- F72181/P Basic Training Barracks (F7218P, UM PN used in ISR)
- F72400/P Officer UPH, (F7240P, UM PN used in ISR)
- F74014 Child Development Centers
- F74028 Fitness Facilities

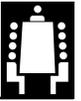
The MACOM then must validate those cases where the requirement exceeds the threshold. If the MACOM fails to validate the installation's requirement, the requirement is set back to the threshold, and will stay there until the next update cycle.

That's the process in a nutshell. The bottom line is: **Don't beat up on RPLANS, ASIP, ACTS, FPS or ISR if you don't like your ALLOWANCE! Figure out what the REQUIREMENT should be and put it in RPLANS (Installation Status Report for non-RPLANS sites).**

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Allowances & Requirements Process





Many Army installations are discovering the importance of linking their master plan more closely with the surrounding community. There are many reasons for this — our Army interest in privatizing and partnering, new environmental legislation and initiatives, community concerns for economic health in an era of downsizing, and Army concerns for continued training land viability. These were highlighted in recommendations from both a recent Army Audit Agency study and a select MACOM-Installation Master Planning Review. The recommendations included inviting community participation in the Real Property Planning Board and increased professional contacts between planners. One of the main benefits of this increased interaction should be a better mutual understanding of the dynamics of the two planning processes. The following article was written to support this initiative and appeared in the September-October 1996 issue of VAPA Newsbrief, the newsletter of the Virginia Chapter of the American Planning Association.

What local government planners should know about Army installation planning

by Rik Wiant

Why should local government planners know anything at all about the Army's master planning process? This would have been a hard-to-answer question several years ago. Army posts were fairly isolated, hermetical communities. To be certain, there were some similarities — the Army has for a long time compared its posts to small cities. And the basic principles of planning are fairly similar in any case. But there wasn't a lot of need to understand the details of the process — or be involved in it.

That situation is now changing. As the Army downsizes, it is looking for opportunities to privatize some of its (utilities) services and partner with local communities for a whole range of other services which help determine community quality of life. And, like its civilian neighbor, the Army community is now regulated by an expanding torrent of external environmental regulation. Army installation commanders, directors of public works and their planners, environmentalists and real property officers are increasingly learning to build links with their surrounding communities.

Planning on Army installations enjoys more similarity to that done in local communities than might be imagined. The end objectives are similar: creation of a place where people will want to live and work, which is, at the same time, a good place to do business.

On most installations with a lot of soldiers, the "business" is to train and prepare to deploy to support national objectives. This is different from most

communities, but it still translates into having quality housing and services, adequate transportation and utilities infrastructure, and the right type of facilities needed to train, maintain, supply and administer the units stationed there.

Like any community chief executive, the installation commander has some major challenges in making this happen. There is never enough money to do all that needs doing, nor easy agreement on spending priorities. Commanders, like mayors, are often distracted by short-term issues and projects, not to mention "unfunded mandates" from higher headquarters. When they are successful, it is usually because they have a usable master plan and the support of the installation's Real Property Planning Board — the equivalent of a city council, board of supervisors and planning commission.

The master plan itself is divided into four components. The most stable part, the Long-Range Component, should have the most in common with local community plans — and should reference them. It addresses a host of environmental and land-use issues. It also contains the Installation Design Guide, which addresses those design features that give the post its unique signature.

The other component of interest to the community is the Capitol Investment Strategy, which provides a roadmap to an optimal match between facilities and their users. The Capital Investment Strategy should address all cases where facilities available within the local community could meet part of

the installation's requirement, including privatization and partnering.

All the components of the master plan are reviewed and approved by the Real Property Planning Board.

Within the last year, the Army has reviewed its master planning process. One of the recommendations was that local planning officials be invited to participate as non-voting observers. Along with it, came the recommendation that all installation master planners establish an effective, cordial relationship with their local planning organizations.

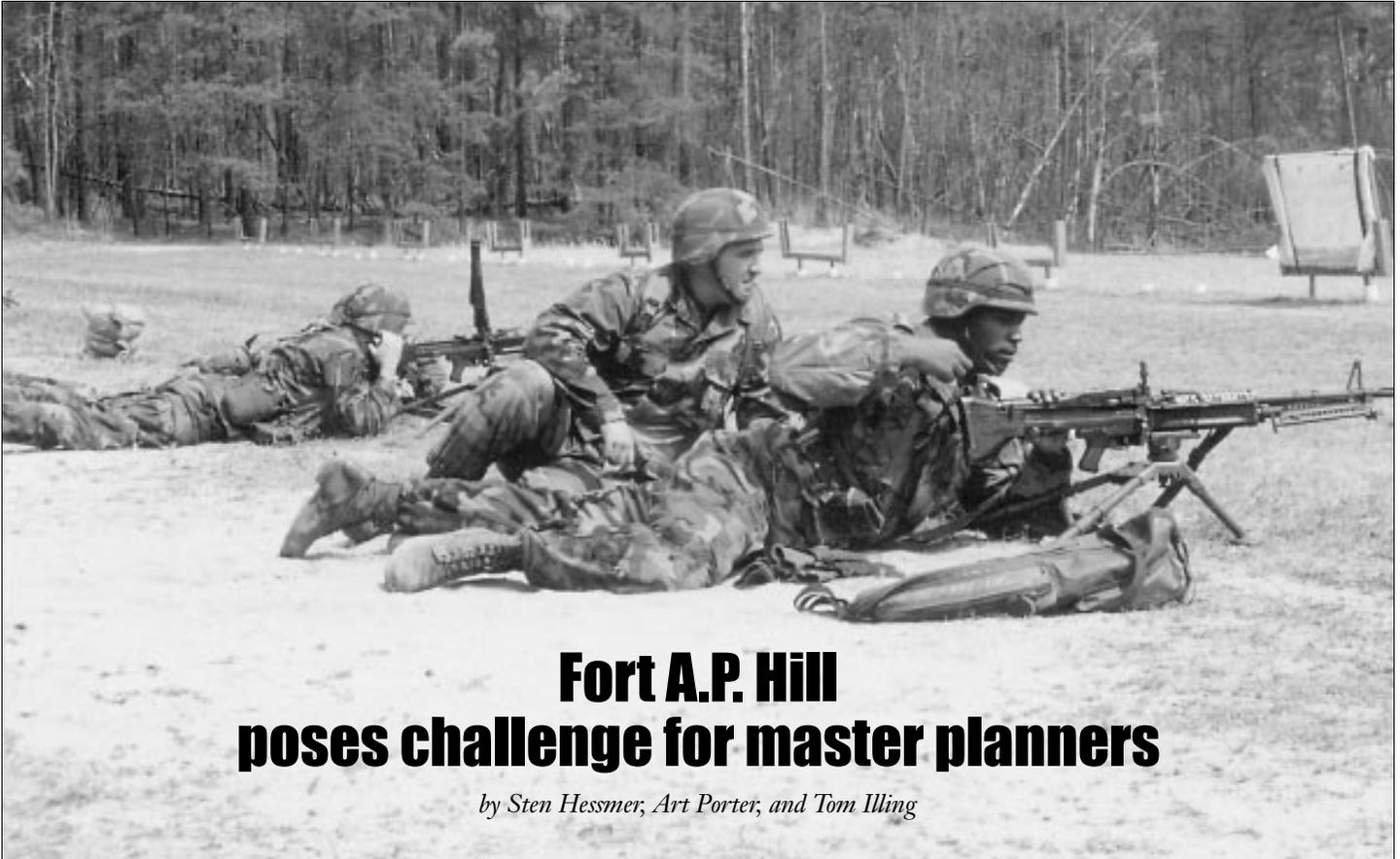
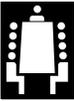
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PWD

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Fort A.P. Hill poses challenge for master planners

by Sten Hessmer, Art Porter, and Tom Illing

Soldiers train with M60 machine guns.

Real property master planning for smaller Army installations with large seasonal training loads can present unique challenges. These posts do not have a large permanent force structure, making the definition of the population base a significant issue. One such installation is Fort A.P. Hill in northeastern Virginia, about 75 miles south of Washington, DC.

The problem:

Fort A.P. Hill consists of 76,000 acres of gently-rolling, forested land. The permanent year-round population, including tenants, is less than 300 personnel. The mission, however, is to provide maneuver and range training for up to 130,000 personnel on an annual basis. The world class training installation provides the primary training facilities for Active Army elements of the Military District of Washington, the Naval Special Operations Forces from Little Creek Naval Amphibious Base, and a variety of Reserve Compo-

nent organizations from a wide region of the Mid-Atlantic United States.

This large divergence between permanent and training populations presented a challenge in the development of a realistic future plan that would help to guide Fort A.P. Hill into the 21st century. The US Army Center for Public Works (CPW) took on this challenge with the help of R&K Engineering, Inc.

The Army uses several automated tools for real property and planning information, including the Installation Real Property and Analysis System (RPLANS), Installation Status Report (ISR), and Facility Planning System (FPS). The primary tool for determining future requirements is RPLANS. This system utilizes real property information from the Integrated Facilities System Mini/Micro (IFS-M) and force structure from the Army Stationing Installation Plan (ASIP). However, corporate databases for Fort A.P. Hill do not reflect the full training population that the installation must accommodate.

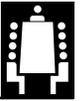
The challenge for the Fort A.P. Hill Master Plan was to determine a realistic baseline population against which to project facility requirements.

The solution:

To develop the Master Plan, we used RPLANS, validated real property data, and two sets of population data. The initial effort at Fort A.P. Hill was a real property validation survey completed by CPW, which was used to update information in IFS-M. The two sets of population data were derived from the ASIP and a Training Unit Tabulation (TUT). The TUT was developed by R&K Engineering in close cooperation with the staff at Fort A.P. Hill to determine training loads on maneuver and range assets.

For an installation with a large number of active duty organizations which conduct field training, the development of a TUT is straight forward. The list of permanent-party personnel is available in the ASIP, and range requirements





are usually controlled by the permanent-party force structure on the installation. The impact of reserve and visiting organizations is small by comparison, and their requirements can often be met by using the excess capacity of facilities planned for permanent party personnel. At Fort A.P. Hill, the TUT is much more complicated, as the number and structure of reserve and visiting organizations generally control the training facility requirements of the installation.

An evaluation of the training records indicated that most of the training at Fort A.P. Hill occurs from April through October of each year. We compared the daily population and the composition of the training units during this period to active-duty units to see if we could find a close match. We did — the composite training population at Fort A.P. Hill closely resembled a Light Infantry Brigade. This allowed us to use the stationing capability of RPLANS to evaluate the facilities requirements associated with training a Light Infantry Brigade at Fort A.P. Hill.

The application:

The application of the data developed for planning purposes at Fort A.P. Hill involved using RPLANS to develop a Tabulation of Existing and Required Facilities (TAB) as the basis for future planning. We used the RPLANS system, loaded with the validated IFS-M data and ASIP population, to determine



Active duty soldiers from Fort Eustis use Fort A.P. Hill range facilities.

allowances for permanent-party personnel facility needs. Then we supplemented the ASIP population data with the force structure of a Light Infantry Brigade to determine the facility allowances required to support the training population.

We evaluated the functional use of each facility type to determine which population was being supported to decide which allowance to use for future requirements. We supplemented these facility allowances through interviews with staff personnel.

The results:

The results of this planning challenge culminated in a comprehensive master plan for Fort A.P. Hill that includes a validated database, a long-range component, a short-range component, a Capital Investment Strategy, budget programming documents (1391s), a Range Development Plan and a TAB. The close cooperation of CPW, Fort A.P. Hill, and R&K Engineering produced the highest quality and most effective plan possible.

The continued downsizing of all training budgets emphasizes the need for a pro-active plan for resource allocation. The real property master plan at Fort A.P. Hill will provide guidance into the 21st century for facility requirements **and** allow training personnel and planners to allocate limited training assets in the most efficient and comprehensive manner.

POC is Sten Hessmer, CECFPW-FP, (703) 428-6442 DSN 328. **PWID**



Reserve units on combat patrol in Fort A.P. Hill's maneuver area.

Sten Hessmer is an architect in the Planning and Real Property Division of CPW's Facilities Management Directorate; Art Porter is R&K Engineering's branch manager in San Antonio, TX, and Tom Illing is their project manager for Fort A.P. Hill's Master Plan.



Fort Lee's Harrison Villa— a 5-Star energy showcase project

by Kevin McCulla

In 1995, the Army, together with the Office of the Secretary of Defense and the Environmental Protection Agency (EPA), set out to construct the most energy-efficient and cost-effective Army family housing possible with the greatest payback and the highest return on investment. The partnership was formed to give the Department of Defense and the US Corps of Engineers a chance to examine their existing methods of constructing family housing and analyze what it would take to achieve the 5-Star energy conservation rating developed by EPA.

The EPA 5-Star Energy Homes Program looks at the standard energy construction practices for each city in the United States and adapts the Department of Energy, Model Energy Code Computer Program (MECCHECK) as the baseline for the minimal standards. Once the information or baseline is established, the EPA 5-Star Program looks at what additional energy conservation practices can be used to increase the energy efficiency.

The Army already had a project in preliminary design to construct 135 dwelling units of military family housing at Fort Lee, Virginia. Here was an excellent candidate to analyze the standard energy construction practices for that area, to review the US Army Corps of Engineers specifications, and to determine if the Army could, with a minimum amount of additional funding by the Office of the Secretary of Defense, achieve a 5-Star rating from the EPA.

The first step in this analysis was to look at the standard energy code for Richmond, Virginia, as defined by the MECCHECK program and to run the computer simulation and analyze the results. This data would determine the energy code baseline.

Richmond, Virginia, was chosen because it is the closest city in the MECCHECK database that would be repre-

sentative of the climatic and energy standards that could be applied to Fort Lee. Assuming that Richmond's standards were the minimum, the US Army Corps of Engineers specifications on the Fort Lee, Harrison Villa Project, Whole Neighborhood Replacement Project were then run on the MECCHECK computer simulation program. The analysis showed that, using the existing Corps specifications, the Army would have constructed a 22.5 percent more energy-efficient house over the standard building practices of the Richmond, Virginia, area.

Finally, the EPA 5-Star model energy home requirements were analyzed using MECCHECK. After the Army determined what additional features needed

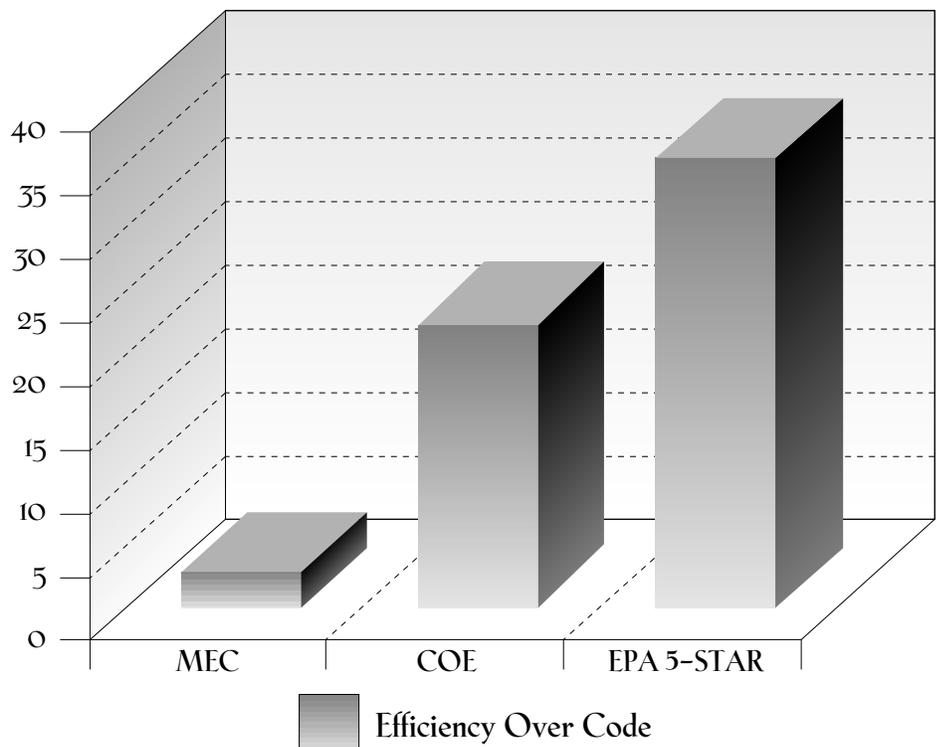
to be added to the Corps specifications to obtain an EPA 5-Star rating, the analysis showed that the Army would have to increase the energy specs in their existing RFP to an energy efficiency of 35.5 percent as shown in the chart below.

The energy conservation measures used in this project were:

- Selection and utilization of natural gas furnaces with an AFUE of >90%.
- Air conditioning systems with a seasonal efficiency factor (SEER) of 12.0.
- Minimum opaque wall with a U-Value of R-22.60 in the walls.
- R-41 in the ceilings.

ENERGY STAR HOME

Fort Lee, Virginia — Harrison Villa Showcase





- Low-e glazed, thermally broken, low infiltration windows.
- Low-energy consumption dishwasher.
- House-wrapping to reduce infiltration.
- High energy-efficient water heater.
- Circulation fans in the bedrooms.
- Blower door test.
- Fresh air into HVAC system for occupants' health.
- Sealed duct work.
- Electronic programmable thermostats.
- All return and supply duct work to be run in the "conditioned envelope" of the quarters.

An additional requirement was to have the specifications rated and accepted as a 5-Star energy rating by the EPA.

The Office of the Secretary of Defense provided the additional funding to make this project happen. It was awarded on September 11, 1996, to Hunt Building Corporation, whose proposal received the highest technical score of the six proposals received and was within the available funding limit.

The EPA reviewed the Army's RFP before it was set out for bids. The EPA and the US Army Corps of Engineers analysis indicated that the 135 units at Harrison Villa will save approximately \$83,671 annually in fuel bills. This annual savings, converted to a net present value for a 25-year life is approximately \$1,456,979 — assuming a 25-year life and a 3 percent discount rate in accordance with DoD criteria). EPA also concluded that this project will equate to a 13 percent return on investment. The rate of return for subsequent years will increase in direct proportion to the increase in energy prices.

The Department of Defense's energy goals are to have buildings 20 percent more energy efficient than the standard building practices of the area; encourage more energy-efficient lighting and appliances; maintain and improve indoor air quality; and reduce energy bills. This project is 35.5 percent more energy-efficient than the standard building practices for the Richmond, Virginia, area. We now will have a 5-Star EPA energy rating on these houses.

From an engineering standpoint, the Army determined that it would not

make economic or engineering sense to strive for a higher goal or a rating above 35.5 percent. To achieve that end, we would be trading off fresh air makeup and using untried or unproven technology.

By building "energy efficiency" into our military design specifications for military housing construction and revitalization, we can significantly reduce DoD's energy bills and, at the same time, increase the quality of life for our soldiers and their families. The project at Harrison Villa will allow our military personnel to live in more comfortable houses with less maintenance require-

ments and increased energy efficiency for years to come. We will be monitoring this project and auditing the final results to determine if it makes sense to increase the Corps of Engineers specifications to achieve a 5-Star rating in all future housing projects.

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Kevin McCulla works on fuel conversion projects, utility system privatizations and energy conservation and management issues in CPW's Directorate of Army Power Procurement.

Need for guidance on orientation of receptacles

Most receptacles are installed vertically with the ground pin down as shown in figure 1. Most people believe that this is the only correct orientation of receptacles.

But which is the better way to orient a receptacle? Ground pin up or down as in figure 2? The National Electrical Code does not specify the orientation of a receptacle.

Recently, a technical journal called *PQ Today* had an article supporting placing it up— "A ground pin upward can be more safe." The argument put forward by the journal is that plugs frequently become loosened in service and move away from the receptacles. Gravity acting on the cord pulls the plug down and away from the outlet, thus exposing the upper conductors first. If an object drops down from above the plug, it is likely to touch the hot conductor.

There are a significant number of accidents in which paper clips or covers of receptacles have shorted out lines and neutral conductors. On the other hand, if the receptacle is installed with the ground pin up, any dropping objects will touch the ground conductor. This causes no damage, because the ground conductor carries no current.

Since there is no standard or specification for the orientation of receptacles, approximately 75 percent of receptacles are installed with the ground pin facing down. Based on the above explanation, the National Electrical Code should provide guidance for the orientation of receptacles.

POC is Thomas Luu, CECPW-EE, (703) 806-5163 DSN 656. **PWD**

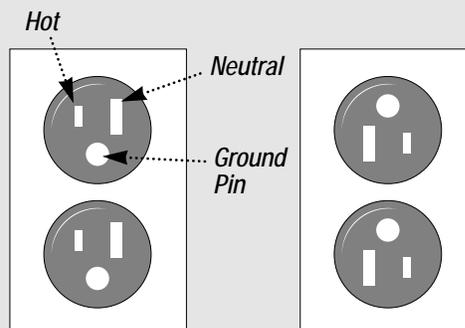


Figure 1:
Ground Pin Down

Figure 2:
Ground Pin Up



How to cope with noise in electrical power systems

In recent years, nonlinear electrical loads due to personal computers, variable speed drives, welders, furnaces, high-intensity discharge lighting and other electronic equipment have expanded rapidly. These loads produce harmonics that can cause noise and resonance as well as other problems in electrical distribution, communication, and data systems. These noise signals may cause problems many miles from their source. Figure 1 illustrates a typical waveform with electrical noise.

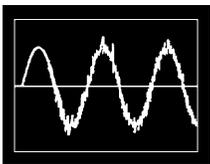


Figure 1:
Waveform with electrical noise distortion

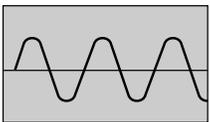


Figure 2:
A normal sinusoidal waveform

Noise can be unwanted electrical signals superimposed on a useful normal sine wave (shown in Figure 2). It appears between the grounding conductor and line conductor or between the grounded conductor (neutral) and the grounding conductor (ground). This type of noise can destroy the integrity of computer low-level signals by driving stray currents through all the available grounding paths, making a "ground loop" through the signal circuit.

The level of noise in a wiring system varies from one volt to two volts. When it exceeds this level, it may cause equipment malfunctions and can interfere with the low-level signal of the digital systems.

For example, all microprocessors operate sequentially and are driven by an internal clock operating at millions of cycles per second. Instruction words are brought into the processor from memory and are then executed over the next few cycles. As each instruction is completed, the address of the next instruction is found in the memory. If one sequential address or the instruction it contains is slightly altered, the processor is unable to continue correctly with the programmed sequence, and an error or halt occurs.

Noise cannot be eliminated, but it can be reduced to tolerable levels.

Steps to reduce noise include:

a Using oversized ground conductors on the grounding electrode conductors and the power panels in the system. Any lowering of impedances in this location will help to shunt the noise coming through the transformer.

b Feeding motor drives, welders, and similar noise-producing equipment from their own power panels.

c Using shielded isolation transformers as noise rejectors that provide good common mode noise isolation and break up ground loop current paths. A shield between primary and secondary circuits of the transformer reduces ground noise and shunts noise current to the ground.

d Using shielded power-line filters to prevent noise on the power line from coming in and keeping local noise from going out.

e Using dedicated and isolated ground circuits to minimize the transmission of electrical noise through branch circuit wiring. These methods are used to reduce interference caused within the building or office area.

Each practical noise reduction action should result in less noise where it is harmful, often by giving it an easier path to ground elsewhere. In order to avoid errors and malfunctions of devices (as microprocessors, workstations, monitors, controllers, data acquisition computers), provide clean power to the device and properly connect it with a low-impedance grounding conductor.

POC is Anh Vo, CECPW-EE, (703) 806-5175 DSN 656, FAX: (703) 806-5020, e-mail: Anh.T.Vo@CPW01.USACE.ARMY.MIL **PWD**

Army personnel first in line for new fuel

A truck stop in West Burlington, Iowa, recently opened the first retail pump in the state that offers a new ethanol blend of gasoline.

The first customers to line up were Army personnel from the nearby Iowa Army Ammunition Plant. Thanks to the General Services Administration (GSA), the installation has 44 1996 Ford Taurus cars running on the new fuel.

Army commander John Stefanovich and Ron Greib, fleet manager for the GSA, joined Iowa Governor Terry Branstad for the opening ceremonies.

The governor said the opening of the pump helps solve the Catch-22 situation of the growing ethanol industry. "If there are no cars that burn E-85, then retailers aren't going to put E-85 fuel stations in place," said Branstad. "And if there are no E-85 fuel stations, then who will buy a car that uses 85 percent ethanol?"

Praising ethanol, Branstad said the fuel:

- Provides Iowa with energy independence through use of a renewable resource
- Reduces United States dependence on foreign oil.
- Gives farmers an additional market for corn.
- Creates jobs locally.

In 1995, the Iowa ethanol industry used 170 million bushels of corn to produce 425 million gallons of ethanol, bringing \$280 million into Iowa's economy. Iowa currently has five nonretail fueling stations that state vehicles can use. The West Burlington pump is the first one that is not on government property and is open to the public.

Promoters of the new fuel say that E-85 vehicles produce fewer emissions and are thus better for our environment. So far, the Ford Company is the only manufacturer committed to building E-85 models for 1997. **PWD**

(Condensed from an article in **The Hawk Eye** by Jeff Lebr.)



FREE software available

Looking for ways to save money? If your organization or installation is purchasing anti-virus software, you may want to call IBMAV & Norman.

The DoD site license for this company has been extended through 30 September 1997 by the Defense Information Systems Agency (DISA). DISA signed a delivery order with an IBM anti-virus (IBMAV) licensed vendor, "Indelible Blue," and exercised the option in the current Norman Defense Data System contract. It covers all DoD-owned PCs through the end of fiscal year 1997.

The IBMAV DoD-wide anti-virus software license allows the software to be loaded onto any or all personal computers, at work or in the home, of DoD personnel, including privately purchased computers. The software does not have to be removed from the DoD system at the close of the contract. However, no further updates would be provided.

DoD contractors who have questions regarding this contract should contact their Program Management Officer.

IBMAV is available from the ASSIST BBS and FTP servers. IBM provides monthly virus signature updates for IBMAV, which are available on the ASSIST BBS and FTP systems. The updates are normally issued on or about the 20th of each month and consist of a single self-extracting zip file that includes directions for installing the update.

The IBMAV & Norman software and documentation are located in the IBMAV File Area number 19 on the BBS. Access to the BBS is restricted to DoD personnel only. In order to verify a user as being a member of the DoD community, ASSIST must perform a call back to a DSN phone number provided by the individual requesting access to the IBMAV file area.

ASSIST will also accept an access request in an e-mail message from a MILNET address. If neither of these options is available, other arrangements will be made.

On the ASSIST FTP server (IP #199.211.123.12), the IBMAV software and documentation files are available in

the /pub/antivirus/ibmav directory and the Norman software is available in pub/antivirus/norman.

All DoD activities may now plan, install, and configure their networks, knowing that they can use the IBM and Norman anti-virus products over the long term.

ASSIST is an element of the Defense Information Systems Agency (DISA); it provides service to the entire DoD community. For questions about ASSIST or computer security issues, please call 800-357-4231, COMM 703-607-4700, DSN 327-4700 or e-mail: assist@assist.mil. For questions about ASSIST BBS, please call 703-607-4710, DSN 327-4710, and leave a message for the "sysop," or FAX: 703-607-4735, DSN 607-4735.

Non-DoD organizations/institutions, please contact the Forum of Incident Response and Security Teams

(FIRST) representative. To obtain a list of FIRST member organizations and their constituencies, please send an e-mail to docserver@first.org with an empty "subject" line and a message body containing the line "send first-contacts."

To be included in the distribution list for the ASSIST bulletins, send your Milnet (Internet) e-mail address to assist-request@assist.mil. Back issues of ASSIST bulletins, and other security-related information, are available from the ASSIST BBS at 703-607-4710, 327-4710, and through anonymous FTP from ftp.assist.mil (IP address 199.211.123.12).

NOTE: ftp.assist.mil will only accept anonymous FTP connections from Milnet addresses that are registered with the NIC or DNS. If your system is not registered, you must provide your MILNET IP address to ASSIST before access can be provided.

POC is Joseph V. Manno, CECPW-FM, (703) 428-6393 DSN 328. **PWD**

TRADOC Environmental Home Page has news, hands-on help

Training and Doctrine Command's Environmental Division has taken to the Internet with a home page to keep environmental workers up-to-date on regulatory and operational information.

Included on the page is a quarterly newsletter, *EnvironmentAlert*, aimed at military and civilians responsible for environmental planning, training and operations.

This newsletter is one additional step to preventing pollution and conserving natural resources, said Carolyn Reynolds, environmental specialist for TRADOC.

In addition to general environmental news, the newsletter reports on regulations and policy changes related to environmental training, pol-

lution prevention, troop units, ecosystem management, recycling, public works and logistics and automation.

One section of the newsletter, Environmental Management/Issues/News, is updated monthly. The newsletter also provides links to other agencies.

A separate section of the home page, Environmental Programs, is directed to the installation personnel who put all the programs into action.

The home page can be reached at <http://www.tradoc.army.mil/dcsbos/env.htm>.

POC is Jim Caldwell, TRADOC Public Affairs Office, (757) 727-3461 DSN 680. **PWD**



After potable water has been treated and enters the distribution system, it's safe to drink. False!

Just a few years ago, about 350 soldiers at an Army installation became ill and more than half were hospitalized with acute gastroenteritis. Though the dining facility food was thought to be the source of the epidemic, a series of tests found the food to be safe for consumption. Later they discovered that the dining facility had recently experienced problems with its sewer system. Further investigations attributed the outbreak to contamination of the dining facility potable water from numerous unprotected cross-connections to the sewage collection system.

This is one of many scenarios proving the point that even after it enters the distribution system, potable water is still vulnerable to pollution and contamination. Where polluted water affects taste and odor, contaminated water constitutes a health hazard, which subjects the consumer to potentially lethal water borne disease or illness.

The most effective measure that can be taken to protect drinking water quality is to implement a cross-connection control program.

Department of the Army Regulation AR 40-5, Preventive Medicine, prohibits unprotected cross-connections between potable water systems and non-potable water systems. AR 420-46, Water Supply and Wastewater, requires a cross-connection control program with backflow prevention devices for those facilities that have the potential to contaminate the water supply system. Additionally, the American Water Works Association publication, "Recommended Practice for Backflow Prevention and Cross-Connection Control, AWWA M14" provides guidance for implementing a backflow prevention program as well as numerous case histories of backflow incidents.

The US Army Center for Public Works (CPW) has assisted many installations in the development of a cross-connection control program. CPW's program has demonstrated that although backflow prevention devices

How well is your drinking water protected?

were installed, a cross-connection control program did not exist. DPW personnel often lack training in cross-connection control and how to test and repair backflow prevention devices.

CPW has personnel trained in cross-connection control and backflow prevention testing to conduct the cross-connection control program. The program is implemented by using an Indefinite Delivery Type (IDT) contract with an Architect-Engineer (AE) firm. The three-phased program consists of a Phase I Survey (identification of unprotected cross-connections and testing of existing backflow prevention devices); Phase II (preparation of a Cross-Connection Control Plan); and Phase III (on-site training in cross-connection control, testing and maintenance of backflow prevention devices).

Customer feedback indicates that installations are pleased with CPW's Cross-Connection Control Program and the benefits it provides. DPW staff have acknowledged that the training helps management and maintenance personnel to identify cross connections and choose the proper backflow prevention device for a specific hazard.

Don't be fooled by the thought that "We'll get to it later." Thoughts like these are the very reasons why problems generally cost more to fix than to prevent. While addressing issues to ensure that Army soldiers and their families are provided good services, DPWs should also pay careful attention to the possibility of having unprotected cross-connections in their housing areas, schools, child care centers, and dining facilities.

Contact CPW today for assistance in getting your cross-connection control program started.

POC is Gregory Jones, CECPW-ES, (703) 806-5208, DSN 656. 

Plumbing fixture retrofit contract in place

by Nicole Lussier

Federal facilities are required by Executive Order 12902, **Energy Efficient and Water Conservation at**

Federal Facilities, and the Energy Policy Act of 1992 (EPACT) to identify and implement by 2005 all water conservation measures which pay back in ten years or less. Although many options exist for reducing water use, one of the most common ways is through the replacement or retrofitting of plumbing fixtures.

Many Army installations are installing plumbing fixture retrofits to save water and money. Problems, however, have arisen from poor quality plumbing retrofits, resulting in low customer satisfaction.

The US Army Center for Public Works (CPW) now has a contract in

place for plumbing fixture retrofits which can be used at any Army installation throughout CONUS. This contract can en-

sure high-quality products are installed at Army installations.

CPW can assist installations in identifying water conservation projects meeting the ten-year payback criterion. In some cases, estimates of water and cost savings can be provided telephonically. Other measures require on-site assistance to provide reasonable estimates of savings. CPW personnel are available to provide assistance to installations pertaining to all aspects of a water conservation program.

For further assistance, please call Jane Anderson or Nicole Lussier, CECPW-ES, (703) 806-5214/5211 DSN 656. 



Prevent indoor HVAC motor failures and fires

by Richard Duong

Winter is coming... Indoor HVAC electric motors are running again. But don't forget that these small single-phase motors can easily fail and their protective circuit breakers may not trip in time.

One of the most common motor failures is caused by motor windings overheating, causing the motor's insulation to burn. In this case, the circuit breaker may not trip because there is neither an electrical short circuit nor an electrical circuit overload.

There are several types of heat losses when an AC motor is energized, including hysteresis, friction, winding, and core losses. The winding losses are the highest losses of all and could be as high as 25 percent of the total motor energy consumption. The winding losses are the (I²)R heat losses (current square time resistance) resulting from current flowing through the windings. The windings, or coils, are connected to create a rotating magnetic field when energized by 120 AC voltage and are normally made by long copper wires.

Overheating of motor windings can also be caused by other conditions such as a harsh environment, which includes excessive temperature, moisture, lack of air movement, excessive dirt, dust, carbon or other combinations. Inadequate installation may mean incorrect motor mounting such as misalignment or vibrations that occur when bolts are not tightened or sized properly. In addition, supply voltage that is too low or too high can cause electrical problems. Finally, overloading the motor, misalignment of the motor and driven load, and problems with belts, gears, and pulleys can create mechanical failures.

An adequate maintenance program can prevent these motor failures and eliminate fire hazards. Basic preventive maintenance includes:

- Removing dust and dirt from the motor.
- Cleaning and removing debris from clogged ventilation passages.

- Checking for hot running motors, noisy bearings, and moisture in the area.
- Checking filters and electrical wire conditions.

☛ For more information on electrical maintenance programs, please con-

tact Richard Duong, CECPW-EE, (703) 806-5179 DSN 656, FAX: (703) 806-5020, e-mail: richard.d.duong@cpw01.usace.army.mil **PWD**

Richard Duong works in the Electrical Division of CPW's Engineering Directorate.

Beware of flexible gas connectors on appliances

Some older corrugated metal tubes used to connect home appliances to natural gas supply pipes could corrode, leading to a fire or explosion, according to Chairman Ann Brown of the US Consumer Product Safety Commission (CPSC). These connectors are used most often with gas ranges, ovens and clothes dryers.

"The CPSC has received 200 reports of these connectors failing," Brown said. "These failed connectors have been associated with 35 deaths and 59 injuries. We are urging people to have their gas appliances inspected to see if they have one of these old, potentially dangerous connectors."

The connectors the CPSC is warning consumers about are older, uncoated, brass connectors, which have not been made for at least the past 10 years. The brass fittings on these connectors, which attach the connector to the natural gas supply pipe and the appliance, were soldered onto a corrugated brass tube. The CPSC believes that the solder can fail, causing a break in the connector and result in a gas leak.

Many of these connectors may still be in use, and the CPSC is warning consumers to have their connectors inspected. Because it is very difficult to tell just by looking at it whether a connector has been soldered, the CPSC recommends that ANY uncoated brass connector be replaced

immediately by a new stainless steel connector or a new plastic-coated brass connector.

The CPSC warns consumers not to move their appliances in an effort to inspect the connectors themselves. The connector should be inspected only by a professional service provider. These older brass connectors with weak, soldered connections could break if moved, leading to an explosion or fire. Moving an appliance, even slightly, if only to clean behind it, could cause a weakened connector to fail.

The U.S. Consumer Product Safety Commission protects the public from unreasonable risks of injury or death from 15,000 types of consumer products under the agency's jurisdiction. To report a dangerous product or a product-related injury and for information on CPSC's FAX-on-demand service, call CPSC's hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270. To order a press release through fax-on-demand, call (301) 504-0051 from the handset of your fax machine and enter the release number.

Consumers can obtain this release and recall information at CPSC's web site at <http://www.cpsc.gov> or via Internet gopher services at cpsc.gov. Consumers can report product hazards to info@cpsc.gov.

☛ POC is Tim Ketchum, DAIM-FDH, (703) 428-7505 DSN 328. **PWD**



Toilet retrofit device not recommended for Army installations

by Nicole Lussier

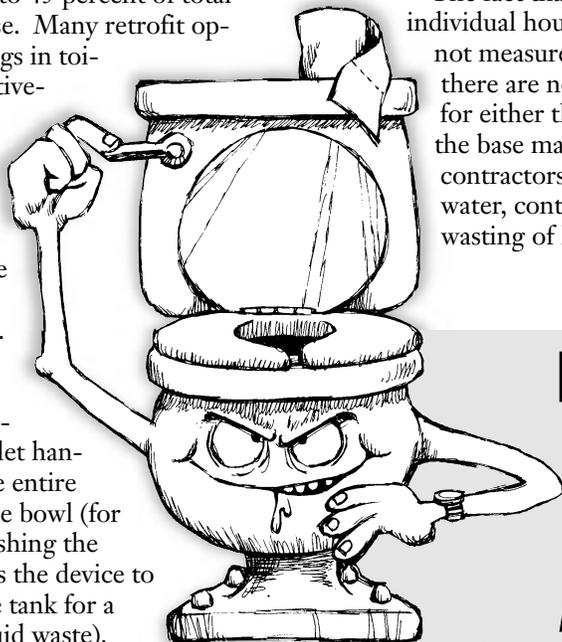
With the rising cost of water, Executive Order 1292, and the Energy Policy Act of 1992, the Army has been pushed to reduce water use at installations.

One of the biggest water users in households is the toilet, which can account for 38 to 45 percent of total household water use. Many retrofit options exist for savings in toilets, which are relatively low cost. One retrofit option which was identified as showing strong potential to cost-effectively save water was the Select-a-Flush device.

Dual-flush devices can be briefly characterized as follows: when the toilet handle is pulled up, the entire tank flushes into the bowl (for solids removal), pushing the handle down causes the device to use only part of the tank for a small flush (for liquid waste).

Under CPW's Facilities Engineering Applications Program (FEAP), a study was conducted by the US Army Construction Engineering Research Laboratories (USACERL) to evaluate the effectiveness of the Select-a-Flush. Effectiveness was based on overall water use and frequency of associated operational problems. The study was performed at Fort Huachuca, Arizona, on older model toilets consuming five to seven gallons per flush.

The findings of the study indicate that the device is not recommended for Army use. Assessments of the data show that under ideal conditions the dual-flush retrofit units were capable of reducing water usage when compared to "typical" flushing mechanisms. However, the problems associated with the breakdown of the devices because of inadvertent abuse and/or manufacturing failure, as well as normal wear, appear to result in little or no actual long-term water savings.



The fact that water use at individual housing units is not measured, and that there are no incentives for either the residents or the base maintenance contractors to conserve water, contributes to the wasting of large amounts

of water. Dual-flush or retrofit devices should be thoroughly evaluated before use under Army conditions since maintenance of the housing units may vary and educational requirements for dual-flush technology can complicate any potential water savings.

Other retrofit technologies, such as a toilet dam, provide equivalent water savings without a change in user habit and have a proven performance record.

For further assistance, please call Jane Anderson or Nicole Lussier, CECPW-ES, (703) 806-5214/5211 DSN 656. **PWD**

FEMP offers energy awareness tool kit

Attention all energy managers, facility managers and energy coordinators! There's something new in the Department of Energy (DOE) Federal Energy Management Program (FEMP).

As a result of numerous requests by federal energy and/or facility managers for ideas on how they can raise the awareness level of their employees, the FEMP has developed an Energy Efficiency Awareness Tool Kit. The tool kit will assist federal energy and facility managers in communicating to their employees the importance of using energy wisely.

Federal energy and facility managers know that all federal employees have a role to play in achieving mandated federal energy and water reduction goals. The tool kit, which will help facility managers achieve energy and dollar savings in their agency, is a year-long efficiency awareness campaign that provides monthly tools to assist with education and awareness needs.

The tool kit includes a monthly plan of information activities, monthly fliers, case studies, articles, camera-ready art of energy snapshots, a poster, and a button (extra copies of the tool kit can be obtained as well as of only the poster and/or button). The energy manager's role is only to ensure that all or some of the monthly activities and materials are used or dispersed appropriately to employees. The tool kit is meant to be user-friendly, requiring only a couple of hours of time each month.

FEMP considers the tool kit to be the first undertaking in an ongoing awareness effort and will make every attempt to incorporate your suggestions for improving it. If for any reason it does not satisfy your in-house education and awareness needs, please do not hesitate to contact Tatiana S. Muessel at (202) 586-9230. To request a copy of the tool kit, please contact the Energy and Renewable Energy Clearinghouse at 1-800-DOE-EREC.

Right now, they are saying it will be about six weeks before these come in, so call early to get your name on the list.

POC is Jim Campbell, DALO-TSE, (703) 614-6564 DSN 224. **PWD**



Fort Riley implements new ideas for fire safety

Public Works fire chief John Boyd and customer relations specialist Paula Fultz teamed up with their Public Affairs Office to make the Fort Riley community aware of fire safety. Their goal was aimed at getting as much information to the public as possible.

To accomplish this, they created public service announcements to air on the local television stations. The production included actual firefighters demonstrating what they do during a search and rescue along with a message about fire safety. The team also designed and had posters made of a firefighter carrying a child. The posters have different slogans such as: **We still make house calls. Are you next? Had a fire drill lately?** At the bottom of each poster, there is a paragraph giving information about how many children die in fires and encouragement to visit a fire station and learn fire safety.

There has been a real push to get people to bring their families to the Fort Riley fire station to meet the firefighters and learn about fire safety. Since the campaign began last year, visits and tours of the fire station have tripled and are still going strong.

LTC Gary Heer, Director of Public Works at Fort Riley, has decided to run the public service announcements throughout the year due to the tremendous impact they have had. Like any installation, Fort Riley has a constant soldier turnover. Running the public service announcements is an excellent way to get the fire prevention message to as many Fort Riley residents as possible.

POC is Chief John Boyd, DSN 856-4257 or Paula Fultz, DSN 856-6041.

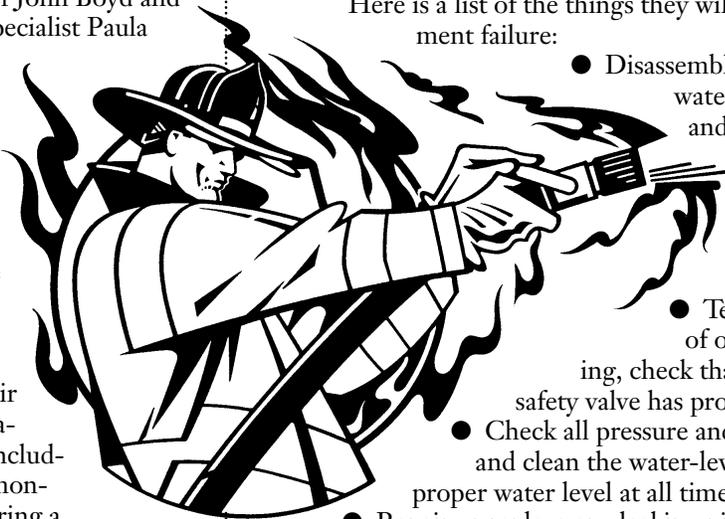
PWD

Prepare heating boilers for winter

by John Lanzarone

As the nights get cooler, most people think of football and deer hunting or wonder if their stack of firewood is sufficient to make it through the winter. While DPW heating shop people are no different than the rest of us, they're also thinking of the coming heating season. Getting all the heating equipment started for the coming cold weather is a very busy time for them.

Here is a list of the things they will be doing to avoid unexpected equipment failure:



- Disassemble the low-water cutout and makeup-water feeding device. Clean, recondition, and test before the boiler is put into service. This work must be performed by qualified personnel.
- Clean burner assembly and adjust combustion controls for maximum efficiency.
- Test the safety/relief valve for freedom of operation. After the boiler is operating, check that the valve reseats properly. Assure safety valve has proper relieving capacity.
- Check all pressure and temperature controls and gauges, and clean the water-level gauge glass so that it indicates proper water level at all times.
- Repair or replace any leaking pipes or fittings on the boiler or anywhere throughout the heating plant.
- Insulate water lines exposed to freezing temperatures. Steam and condensate lines should also be insulated to reduce energy losses and for safety concerns. Some steam traps are subject to freezing, so be careful when selecting trap types.
- Check all mechanical equipment, such as fans and pumps, for smooth operation and proper lubrication.
- Establish and maintain a record of boiler operation.
- Clean boiler heating surfaces of all deposits to avoid waste of fuel and problems with the boiler. Inspect refractory.
- Clean the boiler water surfaces if the boiler design allows; otherwise, consider using a suitable chemical to minimize buildup of scale and prevent corrosion.

In addition to the above items, the following should be performed, dependent on whether a boiler is producing steam or hot water:

FOR STEAM BOILERS:

- Check condensate float valve.
- Check pressure controls.
- Check condensate return pump(s).
- Check condensate tank.
- Check feed and transfer pumps.
- Check draft fans/switches.
- Check gas safety switches.

FOR HOT WATER BOILERS:

- Check circulating pump system.
- Check water cutoff.
- Check water feeder.
- Check shutoff valves.
- Check temperature controls.
- Check draft system.

For more information about heating systems, please call John Lanzarone at (703) 806-6067 DSN 656. **PWD**

John Lanzarone is a mechanical engineer in the Mechanical & Energy Division of CPW's Directorate of Engineering.



How to develop a career in Professional Planning and Real Property Management

by Jerry Zekert

Our models for installations are now defined in the context of local cities or towns that provide a home or a community for our soldiers, civilians, families and dependents. With this focus, our communities are operated like hometowns. We plan our communities similar to how our local cities and towns plan. We account for our land and facilities very much like local communities do. In other words, we work regionally with our surrounding communities to plan jointly.

To municipalities, our real property and master planners encompass the

field of urban planning. They are what local cities call city planners.

How do we better adapt to these changing paradigms? How do we better prepare ourselves to provide true community master planning and real property management?

Participating in the American Planning Association (APA) is one way Army Planning and Real Property professionals can better prepare themselves to support these changing paradigms.

APA is the national professional society that promotes quality urban planning for our nation's cities, towns,

counties and local municipalities. APA sponsors a professional certification program for planners and continuing education, while providing technical resources to help members resolve tough planning issues. It is a critical source for networking among planning professionals worldwide. Most local and state planners and economic development managers are members of APA.

How can you become a member of APA? APA has two tiers of membership. Federal Planners can join the Federal Planning Division of APA. Federal Planners worldwide from the Army, Air Force, Navy, the Department of the Interior, and GSA are members of this group, which focuses on finding ways to provide quality planning support to the federal sector. The cost of this membership is \$25.00 per year. As an associate member of APA, you receive a quarterly newsletter and can network with your peers in the other agencies.

The second tier is full membership in APA. This entitles you to the full services of the American Planning Association, including a monthly subscription to *Planning* magazine, one-stop assistance with APA on current national policy issues and planning solutions, and the ability to become a Certified Planner. The cost of this membership depends on your income. Further, you can become a member of the State APA chapter, where your local community planners actively participate and learn what planning initiatives they are pursuing. You can even share work that is going on at your installation. The potential for networking and partnering is tremendous.

If you are interested in joining this professional society, please contact Jerry Zekert, Army liaison to APA and the Federal Planning Division, at (703) 428-6139, e-mail: jerry.c.zekert@cpw01.usace.army.mil; or Rik Wiant at (703) 428-6086, e-mail: Fredrik.Wiant@cpw01.usace.army.mil **PWD**

1996 DPW Training Workshop update

The 1996 DPW Training Workshop is getting close! The 3-5 December workshop will contain a series of General Sessions covering topics of interest to the entire DPW Community. Some examples are USACE Installation Support Programs, ISR, BASOPS and Construct FAA. In addition, there will be numerous breakout sessions covering topics such as Privatization, Environmental Programs, Engineer Resource Management Issues and Changes.

Pre-workshop MACOM (FORSCOM, TRADOC, USARPAC, USACE, AMC) sessions are scheduled for the afternoon of 2 December. A MACOM Engineer Conference is scheduled for the morning of 6 December.

Quotas have been given to MACOMs based on the size of the organization/staff, and attendee lists should be submitted by MACOMs directly to CPW.

The registration fee for the workshop is \$100.00, down \$50.00 from last year. There are a number of payment methods. The preferred

method is to get your MACOM to send a MIPR (Military Interdepartmental Purchase Request) in a lump-sum for all its attendees. Individuals can also MIPR funds or pay at the workshop by check or money order. All MIPRs should be FAXed to (703) 428-3862, DSN 328, USACPW, ATTN: CECPW-RB (Diane Roles), 7701 Telegraph Road, Alexandria, VA 222315-3862, phone: (703) 428-7917.

Each attendee is responsible for his own reservation, which must be made by 1 November. A block of rooms has been reserved at the Ramada Hotel, Old Town Alexandria, for 2-5 December. Attendees making reservations should indicate that they are attending the **DPW Training Workshop**. For room reservations, please call (703) 683-6000.

If you have questions or concerns about the workshop, please contact your MACOM Engineer representatives first! For additional information, please contact CPW's Thomas Cook at (703) 428-6036 or Johann Grieco at (703) 428-7589.

PWD



Army Materiel Command IFS-M Real Property Standalone training held

U.S. Army Materiel Command Installations and Services Activity (AMC I&SA) and Development Center Lee (DCL) representatives provided functional and technical Integrated Facilities System Mini/Micro Real Property Standalone (IFS-M RPS) software deployment training to representatives from 29 AMC installations and 3 Major Subordinate Commands. Thirty-nine people were trained.

The first class (26-30 August 1996)

was primarily for government-owned and government-operated installations. The second class (9-13 September 1996) was geared toward government-owned and contractor-operated installations. Additional classes are being scheduled to train the remaining five sites.

The IFS-M RPS, a relational database Windows-based software package written in Microsoft Access, provides the installation Real Property Office the capability to:

- Maintain and manage their real property assets.
- Provide real property updates to higher headquarters.
- Create queries and reports.
- Import data into spreadsheets and other Windows applications.
- Graphically display data in bar/line/pie charts

AMC I&SA saved approximately \$25,000 by providing training using in-house and Development Center, Fort Lee instructors. Installations funded their own travel and per diem.

During each wrap-up session following the training classes, attendees expressed appreciation for the training presentation, handouts and the opportunity to participate. Many attendees stated they could not have used the IFS-M Real Property Standalone software without the training class.

We feel this is the most successful way to transition from one software platform to another. In the past, software packages were furnished to the installations without the follow-on training, such as Desktop Resource for Real Property (DR-REAL). Many installations either didn't load the DR-REAL or didn't feel comfortable using it. During our training classes, we combine the "how to use" with "why do I do this," for tasks such as creating grant records, correctly entering disposal information to assure installations receive Facility Reduction Program credit, or creating assignment records.

These were our sixth and seventh real property training classes since December 1994. We feel our real property training classes are a "win/win" situation for the installations, our Command, and the Army.

POC is Karren Terrill, AMD I&SA, AMXEN-M, (309) 782-5646 DSN 793. **PWD**

American Planning Association 1997 Planning Conference and the Federal Planning Division Conference set

Get your training requests prepared. The American Planning Association (APA) and the Federal Planning Division are planning their 1997 conference in San Diego.

Last year was a tremendous success. APA had over 5000 attendees in Orlando, Florida, who participated in a broad spectrum of planning and management issues, environmental issues and city management challenges.

Last year was also the first year the Federal Planning Division sponsored a Federal Planning Workshop, where more than 200 attendees from the Army, Air Force and Navy participated. APA was very impressed with the professionalism and quality planning our "communities" are achieving. Numerous installations were cited by APA for their "award winning" master plans. These included HQ TRADOC, Fort Knox, Fort Leonard Wood and Fort Campbell.

This year, we want to build on our successes.

The APA conference will be held 5-9 April 1997 at the San Diego Marriott Hotel and Marina. The Federal Planning Division's Workshop will be held on the 10-11 April 1997.

All the services are participating and will include both the real property and master planning community. New technologies will be demonstrated, innovative ideas shared, and critical partnering will take place.

The Federal Planning Division has arranged for per diem lodging at the U.S. Grant Hotel in downtown San Diego. I encourage all real property and Master Planning professionals to plan early to participate in this unique career development experience. Lessons you learn from not only the Federal Planning Division Workshop but also the APA National Conference can help your installations become better communities to live, work and play.

For more information, please contact Jerry Zekert, (703) 428-6139 DSN 328, or Rik Wiant, (703) 428-6086 DSN 328. **PWD**



Air Force Institute of Technology offers engineering design training

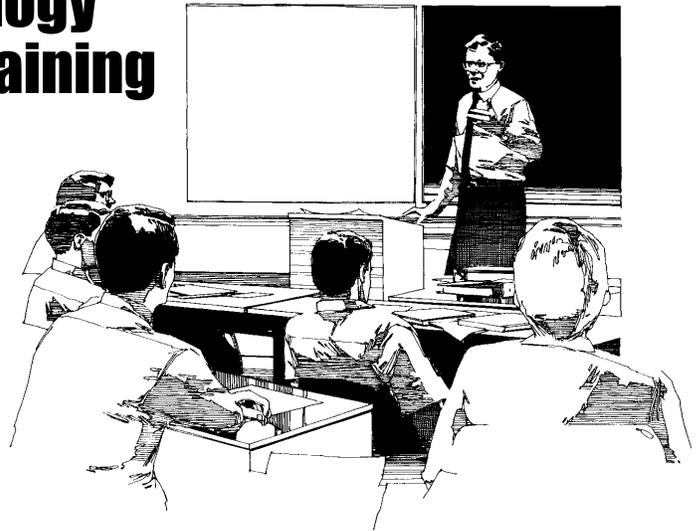
The US Army Center for Public Works (CPW) will continue to centrally manage the Army's training needs for all Engineering Design and Environmental Management courses offered by the Air Force Institute of Technology (AFIT).

The Civil Engineer and Services School (CESS) at AFIT has developed a new process to allocate seat quotas in the courses they provide. The new CESS class fill process will be on a "first-come, first-served basis."

There is no tuition for US government employees attending CESS courses. Employees of companies or corporations under contract to the Armed Services may attend on a "space available—tuition pay basis."

MACOMs have been provided with the complete FY 97 schedule, course descriptions and registration procedures.

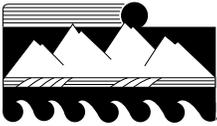
☎ POC for Army employees attending AFIT courses is



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2nd Quarter FY 97 Course Schedule

Course # / Title	Offering #	Class Dates	Applications Acceptance Date Begins
ENG 440: Roof Design Management	97A	3-7 MAR	1 JAN
ENG 460: Mechanical Systems for Managers	97A	3-7 FEB	1 DEC
ENG 470: Electrical Systems for Managers	97A	27-31 JAN	1 NOV
ENG 555: Airfield Pavement Construction Inspection	97B	20-28 MAR	1 JAN
ENG 561: HVAC DESIGN	97A	24 FEB-21 MAR	1 DEC
ENV 020: Environmental Compliance Assessment & Management Program	97B	27-31 JAN	1 NOV
	97C	17-21 MAR	1 JAN
ENV 021: Installation Restoration Program	97A	6-10 JAN	1 NOV
	97B	24-28 FEB	1 DEC
ENV 022: Pollution Prevention	97B	24-28 FEB	1 DEC
ENV 025: Racer	97B	10-11 MAR	1 JAN
ENV 400: Commanders Environmental Management	97A	1-3 MAR	1 JAN
ENV 417: Environmental Restoration Project Management	97A	3-7 MAR	1 JAN
ENV 521: Hazardous Waste	97B	10-14 MAR	1 JAN
ENV 531: Air Quality Management	97B	10-14 MAR	1 JAN



Need to weed out nuisance plants? USAEC can help!

by Susan Phelps and Matthew Sullivan

When you hear the term “pests,” what comes to mind? Insects, rodents, or other small creatures that find their way into your home or workplace?

From an environmental perspective, when the term “pests” is used, it is often referring to weeds. Imagine having to control the growth and spread of these “pests” over thousands of acres of Army land and doing it in a way that will not destroy the surrounding environment and the plants and animals that dwell within. This is the challenge facing the Army.

When weeds and plants begin to infringe upon roads, targets, and training areas, they can pose serious safety and fire hazards. In the past, people have tried to eradicate different types of weeds, with unintended consequences for other types of plant life. The irresponsible use of pesticides poses tremendous problems for the environment — poisoning the air, water, and soil, and killing beneficial plants and insects indiscriminately.

For these reasons, scientists are pushing to minimize the use of pesticides and to control these nuisances by means other than spraying. Last year, Army personnel used over 300,000 pounds of pesticide. Over 75 percent of this pesticide was used for plant and weed control. By using new and innovative strategies, Army pest managers plan on cutting that amount in half before the turn of the century.

One example of a new approach can be found within the Army’s Agricultural Outleasing Program. This program enables farmers to come in and use Army lands to grow crops. The pesticides used by these farmers must be reported and are included in Army pesticide totals. The Army is now working with the farmers to develop programs that will reduce the amount of pesticides used.

Another example of alternative pest control is one installation’s success with a biological control method. By importing a type of beetle that feeds on the nuisance weed, the installation was, in the long run, able to minimize its problem with that particular weed without endangering the surrounding plant life.

Alternative pest control measures require a change in mind-set from the way many Americans react to weeds, says Dr. Steven Bennett, of the U.S. Army Environmental Center (USAEC.) “If you are faced with a nuisance weed, don’t automatically think spray pesticide,” says Bennett. “Think about the possible alternatives. We are encouraging installations to make their success stories known to other installations. This way, the word will get out that alternatives to pesticides can and do work.”

A convert from active Army status as a medical service corps officer, Bennett is an entomologist with a Ph.D., who joined USAEC in early 1994. His primary responsibility is to help Army installations effectively control pests in compliance with the Army entomologist’s “bible,” — Army Regulation 420-76, Pest Management; with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); and with other pest control requirements.

To comply with these guidelines, installations must develop pest management plans to control insects and nuisance birds, rodents, snakes, and especially plant life which may adversely affect health or damage structures, material, or property. The current emphasis is on controlling the spread of weeds on Army installations.

Regulations also require that anyone who applies pesticides be DoD-trained and certified for specific types of pest control. (The term pesticide refers to insecticides, rodenticides, herbicides, and other pest control chemicals.) All installations must also have a Pest Management Coordinator.

In his role as the Senior Army Pest Management Consultant (PMC) for more than 100 active-Army installations and over 60 Army Reserve organizations, Dr. Bennett:

- Provides Army-wide training guidance for pest control personnel.
- Certifies pesticide applicators at installations throughout the Army.
- Provides Army-wide guidance on DoD and Army Program Planning

Requirements for Installation Pest Management Plans.

- Advises Army commands on pest management contracts and on DoD policy regarding the use of specific pesticides and pest control equipment.
- Works on ways to reduce reliance on chemical pesticides.

Dr. Bennett is committed to promoting alternative measures to pesticide use. He sees an urgent need to determine the quantity and types of pesticides used throughout the Army to help establish reduction goals.

“Installations are very good about reporting pesticide use on their monthly Pest Management Reports (DD Forms 1532), but there has been no effort to summarize and analyze that information to make it more useful,” states Bennett. Constructing a database to support Army pest management programs is a number-one priority. To help Dr. Bennett in this quest, George Teachman, a USDA scientist with extensive database and computer experience, has come aboard to develop Army data gathering and analysis capabilities. A system to record and monitor pesticide applicator training and certifications is already in operation.

As the only full-time entomologist at USAEC, Dr. Bennett gets assistance in meeting some of his many responsibilities by contracting with entomologists at the Center for Health Promotion and Preventive Medicine (CHPPM), other DoD agencies, and private contractors. He also works with foresters, agronomists, chemical engineers, and medical and environmental professionals throughout the government to help him get the job done. With these assets, Dr. Bennett continues to develop a strong USAEC program to support installation pest management programs.

POC is Dr. Steven Bennett, USAEC, (410) 671-1565. **PWID**

Susan Phelps and Matthew Sullivan are contributing writers at the US Army Environmental Center.

Public Works

Digest

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