



US Army Corps  
of Engineers®

# Engineer Update

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## Brooke Army Medical Center completed

By James S. Perkins  
And Capt. Brian Tempo  
Fort Worth District

What do you get when you mix an experienced hospital builder, an aggressive contractor, a top architect-engineering (A-E) firm, dedicated on-site user representatives, and other capable people from Fort Worth District? Drop them into northeast San Antonio and you get a \$288 million hospital completed ahead of schedule and within budget, better known as the Brooke Army Medical Center (BAMC).

The new eight-story teaching hospital (six times the size of the previous main hospital) is a state-of-the-art facility of 1.5 million square feet. It replaces the original BAMC built in 1936, which during the years expanded to more than 50 separate buildings and clinics. Services which had been duplicated among these sites now are consolidated in the new hospital.

There is also a new research building housing the U.S. Army Institute of Surgical Research and the Department of Clinical Investigations.

The contract documents for the design include more than 10,000 sheets of drawings and 5,400 pages of specifications with reference to hundreds of industry standards, codes and military and federal specifications.

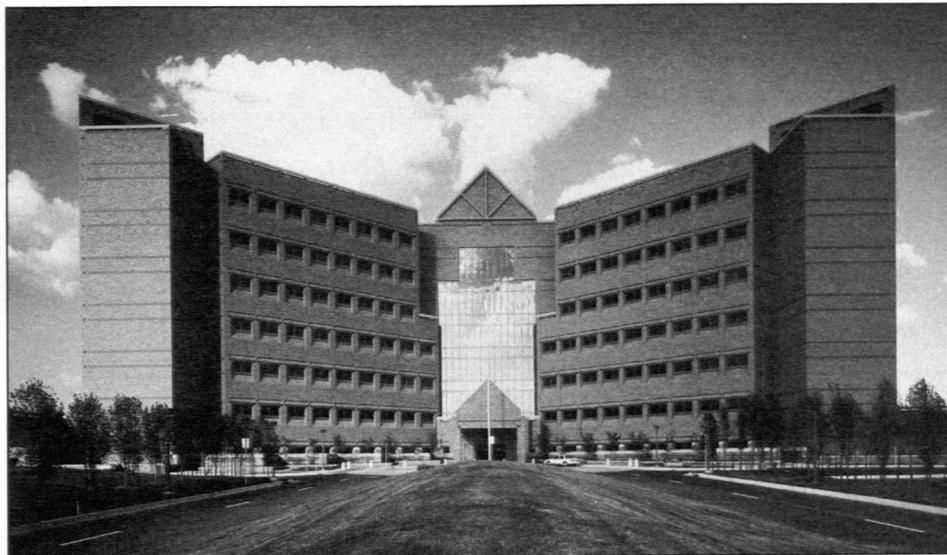
The design began in 1985 when the A-E contract was awarded to the joint venture of HKS of Dallas, and Wingler & Sharp of Wichita Falls, Texas.

The design review alone was an immense undertaking. Teams of A-E representatives, Corps specialists and BAMC's Health Facilities Planning Agency staff met for days to solve the challenges of designing the complex facility. The results showed in the relatively few design questions and problems that surfaced during construction.

One important design feature was to use an integrated building system (IBS) for utilities and infrastructure. Each floor of the hospital has an 8.5-foot-high IBS overhead for routing electrical conduits, cable trays, duct work and plumbing.

The one million square feet of IBS was an added cost, but it saved time during construction because the contractor could install utilities, communications and distribution systems in the IBS while framing, rough-ins and finish work were done on the occupied floor below.

Other IBS benefits include ease of



Brooke Army Medical Center is the latest hospital completed by the Corps of Engineers. (Photo courtesy of Fort Worth District)

maintenance and upgrades. Maintenance can be performed without disrupting patient services and exposing the facilities below to dirt and dust. Changes in medical technology often require reconfiguration. The IBS allows these changes to be made faster and at lower cost, ensuring that BAMC will remain state-of-the-art into the next cen-

tury.

Construction was divided into three phases. Phase I cleared the area and built the road to the site. Phase II built the central energy plant structure, the road around the facility and the utilities. Phase III was the current \$220 million contract to complete the facility for turnover to the customer. Phase III

began Feb. 11, 1992, when the notice to proceed was issued to the prime contractors, George Hyman Construction of Bethesda, Md., and Manhattan Construction of Tulsa, Okla.

Each phase of the construction was conceived with an eye toward the next one. For example, the energy plant structure was built during Phase II. By having a completed structure, the Phase III contractor could acquire and install much of the major mechanical and electrical components. These components have long lead times (several months) for procurement and are critical to operation of the completed facility.

Another contributing factor to the success of the new BAMC was partnering.

"Partnering has been around a long time," said Allen Rowe, BAMC's resident engineer and hospital expert for the Corps. "It's a way of doing business where all parties recognize cooperation and open communications as the keys to focusing on a common goal." Rowe has since been transferred to Fort Bragg, N.C., where he is working on

Continued on page 4

## Corps scores 4 in competition

By Bernard W. Tate  
HQUSACE

The Corps of Engineers made a strong showing in the eighth annual 1996 Army Communities of Excellence (ACOE) awards program. Seattle District and the Waterways Experiment Station (WES) tied for runner-up in the Special Category, and the Engineering and Support Center, Huntsville and Portland District both earned honorable mentions. Runner-ups received a cash award of \$75,000.

The ACOE awards are given annually to Army installations for their efforts to provide support to soldiers, civilians, retirees and their families. In 1995, the ACOE program adopted criteria derived from the Malcolm Baldrige National Quality Improvement Act, which is the standard for world-class quality.

The program has six categories — large, medium and small Army installations inside and outside the continental U.S. Special Category awards are given to Army agencies not located on a traditional installation.

Winners are selected based on an entry package written by the agency, followed by a visit to the agency by an ACOE examination team. This year, 55 installation applications were reviewed and 34 received awards.

The U.S. Army Armament Research, Development and Engineering Center, Picatinny Arsenal, N.J., was named the top winner.

Seattle and WES received their awards along with the other winners and runners-up in a ceremony at the Pentagon on May 9. The awards were presented by Gen. Dennis J. Reimer, Army Chief of Staff; Robert M. Walker, Assistant Secretary of the Army (Installations Logistics and Environment); and Sergeant Major of the Army Gene C. McKinney.

Portland and Huntsville received their honorable mention plaques from Lt. Gen. Arthur E. Williams, Chief of Engineers, in a ceremony at headquarters on May 8.

Seattle District's entry package focused on such strengths as a long-standing management intern pro-

gram, partnering, aligning human resources performance and training with the business plan, and productive process action teams.

A feedback report from the ACOE team at Department of Army stated that Portland District was strong in the areas of leadership, and human resource management and development. "The personal involvement and visibility of senior leaders in setting performance excellence goals is demonstrated in a variety of activities," said the report.

WES was chosen for providing quality research and development while minimizing costs in a competitive environment. WES was cited for continuous improvement, customer service, environmental stewardship, community involvement, facility/infrastructure maintenance, and employee morale and well-being.

Huntsville's ACOE package detailed their formal structure for reinforcing continuous improvement, emphasized strong customer service, and cited innovative practices such as teaming and peer performance reviews.

# Chief bids farewell

As my retirement date draws near, I've been reflecting on my Army career, especially these past four years. It has been an honor and privilege to represent you as the Army's 48th Chief of Engineers and Commander of USACE.

During my career, I have had the pleasure of being associated with a diversity of extremely talented, dedicated, professional, selfless and caring people ... whom I often refer to as the "Engineer family" or "Corps family." Each member of the "family" is unique and collectively they are a superb team of "Super Bowl" quality. I'm extremely proud of having been a member of such a great organization. It is with pride that I look forward to hearing about your future accomplishments.

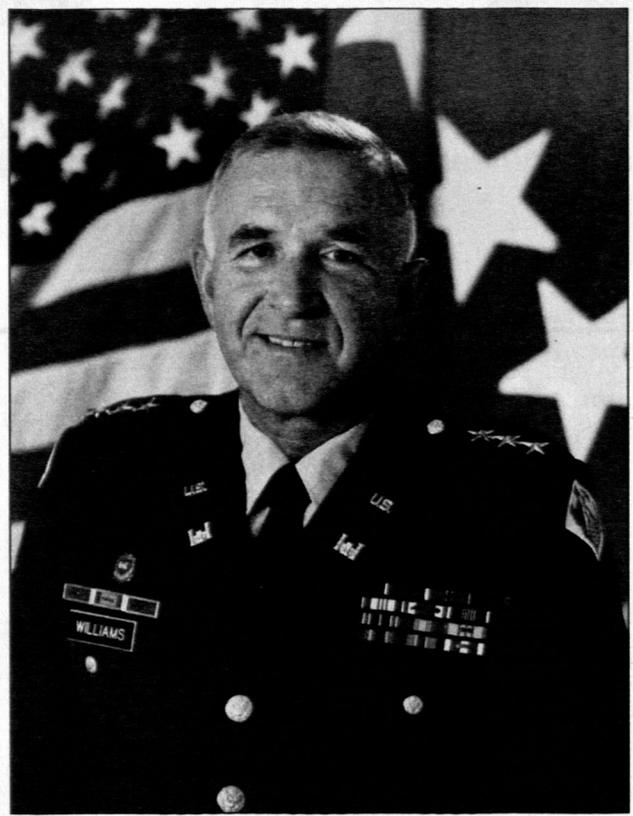
Carole joins me in expressing our sincere thanks and gratitude for your support and friendship. Best wishes to you and your family. May your future be filled with excitement, an abundance of good health, and lots of fun.

*Essayons!*

**Art Williams**

*(Editor's note: Secretary of Defense William J. Perry has announced that Lt. Gen. Arthur E. Williams, Chief of Engineers, will be placed on the retired list at his current grade.*

*Williams is the 48th Chief of Engineers and has completed 33 years of service. His retirement ceremony will take place on June 6 at 10 a.m. at Fort Myer, Va.)*



## Ohio River memories

*(Editor's note: This letter was originally published in the "Castle Comments" of Huntington District.)*

I am pleased and honored to share my thoughts on the supplement to *Men, Mountains and Rivers* (Huntington District's history). I treasure my copy second only to my Bible, and rightly so, as a bit of my history with the Ohio River will show.

My family bought this farm on the banks of the Ohio River in 1931 when I was 1 year old. It was fertile ground and a wonderful place to live but, oh my, the floods!

Our house has a first-floor level of 60 feet. As I grew up, floods were in our house in 1933, 1936, 1937, 1941, 1945 and 1948.

When I married in 1952, I moved to another house on our farm which had a first floor level of 59 feet. We had water on the first floor in 1955, 1957, 1959, 1962, 1963 and 1964. My wife and I could stand it no longer, so we built a house with a first floor level of 65 feet. We rented out the house with the 59-foot level and, believe it or not, the flood water was never in it again. That was 32 years ago!

So I have watched the river from this farm for 65 years and I dare say the Corps' effort to control these floods has been the success story of all time. This success is not only in property saved but also in grief and worry spared to the people who live and farm in this beautiful valley.

I shall never forget the look on my mother's face when we walked into our house after the

1937 flood. My mother had taken me and my brother to a house out of the flood while my Dad stayed in the farmhouse to save what he could. He had four cows and our pony upstairs in the house with the furniture.

The cows and pony were rescued by a riverboat and barge, the hogs all drowned, our car was under 18 feet of water, the hay in the barn got wet and broke the barn floor down, the furniture on the second floor was covered with mud and water and we had only four chickens left.

As soon as the water was gone off the road my mother brought us home. She opened the door and there was the ceiling sheetrock lying on the floor in the mud, the wallpaper hanging loose from the walls, the furniture and all the books ruined. I had seen water in our house before, but not like that.

My mother looked around and a sad look came over her face that I had never seen before. I was only 7 years old, but I knew she was trying to hold back tears. After what seemed like an eternity, she said, "Come on boys; let's clean this mess up."

My mother and dad would not give up and, thanks to them, I am here today on this same farm.

As your marvelous works of engineering progressed in the valley, I visited them during all stages of construction. I went to meetings, wrote letters, visited your office in Huntington, and anything else I could do to promote building the flood control projects. My last effort was to encourage Rep. Carl Perkins to push for the Yatesville Dam on Blaine Creek.

You should publicize the benefits of these giant reservoirs on TV, especially in times of flood. This last flood crested Jan. 22 at 53.3 feet at Portsmouth and caused only minor inconveniences. I read in the Huntington paper what it would have been without the controls. We see so much waste of taxpayers' dollars, but the benefits from the dollars used for flood control reach into all segments of our society.

I look forward to each issue of *Castle Comments* and *Engineer Update*. Keep me posted on the progress of the supplement to *Men, Mountains and Rivers*. If I can help in any way, please feel free to ask. God save the Corps!

**Jack R. Blake**  
West Portsmouth, Ohio

## What ends Dec. 31, 1999?

I am on the mailing list of the *Engineer Update* and each month I look forward to reading the next issue. I find it interesting, informative and fun to read.

I now refer to the first sentence of the article by Ms. Linda Lofstead on page nine of the March issue which states, "The millennium is not the only thing that ends Dec. 31, 1999."

Millennium means thousand, however, the 2,000th year A.D. will start on Jan. 31, 2000, and end on Dec. 31, 2000. Therefore, the millennium ends on Dec. 31, 2000, one year later than Ms. Lofstead believes.

The emphasis would indeed be impressive if it were correct. As published it detracts from the article.

**Erwin C. Hamm**  
Col. (Ret), USAR

*Thank you for the kind words about Engineer Update.*

*You are absolutely right. It has been pointed out many times, in many different forums, that the 21st century (and the next millennium) actually begins on Jan. 1, 2001.*

*The "Engineer Update" welcomes editorials and letters. All submissions must be signed; names will not be used if requested.*

*Address submissions to Headquarters, U.S. Army Corps of Engineers, Attn: CEPA-C (Engineer Update), 20 Massachusetts Ave., N.W., Washington, D.C. 20314-1000.*

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# 'Empty nest syndrome' hits programmer

Article and Photos  
By Maggie Oldham  
Omaha District

For the 43,000 people on the Army Corps of Engineers' payroll, the most noticeable indication that the Corps is now totally out of the payroll business is a different leave and earning statement. But for Omaha District employees like Robert Moss, it's almost like watching your first-born leave home. For Moss, lead programmer for the Central Pay and Leave System (CPLS), the empty nest syndrome has hit.

Thirty years ago, Omaha District began operating the CPLS. That ended with the pay period beginning April 28, when the payroll function transferred to the Defense Finance and Accounting Service as part of the Defense Civilian Pay System (DCPS). On May 1, the last payroll computation and check run was made at Omaha District offices and data was transferred to the DCPS.

For 20 of those 30 years, Moss raised two daughters, but CPLS was the son he never had.

Moss, who began working on the payroll program in the mid-1970s, said the goal of centralizing Corps payroll in 1966 was to make the process more efficient and less expensive to operate. "We were one of the most cost-efficient systems in

the government," Moss said.

In 1966, Corps employees in the continental U.S. began receiving paychecks through the Omaha-based system. The scope grew to include Corps employees in Washington, D.C., Saudi Arabia, Germany and Pacific Ocean Division offices. The system, at one time, serviced as many as 60,000 people on payroll.

CPLS kept pace with the explosion of information technology through three decades, going through six different hardware platforms and changes in data entry and storage from key punch cards to high-capacity disk drives.

Tasks added to the system kept payroll programmers busy fine-tuning CPLS. "One of the bigger things that we stuffed into it was the direct deposit capability," Moss said.

The Thrift Savings Plan was another. "We were one of, if not the only, DoD payroll system that had it on-line, on-time," he said. "We pulled our hair out to make it work, but we did it. Many, many late hours, but it worked."

That was just one of several nights he played nursemaid to the system. Another was when one of the older computer systems in Omaha went on the blink during payroll week and CPLS had to be run from the North Central Division offices in Chicago. "It was a little interesting but we



Computer programmers like Omaha District's Gayle Gesser and Robert Moss kept the CPLS running smoothly for 30 years.

managed," Moss said.

Omaha District computer programmer analyst Sue Antholz Payne said payroll was always the highest priority. "Whatever it took, we had to get payroll out," she said.

When the system burped or ran into a glitch, that meant staying with it to fix the problem, although those times were rare. The system had an excellent track record ensuring Corps employees were paid on time. "We've never, ever been late," Moss said.

"There was a lot of pride behind it and a lot of effort to make it good,"

computer payroll programmer Gayle Gesser added. "When you look at the error rate (which was next to nothing) and the dependability of the system, it can't be matched."

"It was a major part of my life for almost 20 years," said Moss, who will now play a role in helping Omaha District implement the Corps of Engineers Financial Management System this summer. "This system has been my professional career for 20 years. It's like a kid to me almost . . . so it's a little difficult to watch it walk away."

## Administration proposes water resources program

The Clinton administration has sent Congress proposed legislation to meet the nation's needs for navigation, flood damage reduction and environmental protection.

The administration's proposal authorizes the Corps of Engineers to proceed with building 13 projects, and to make needed modifications to eight existing ones. It also contains 32 general program provisions.

"I believe that this package maintains the Clinton administration's lead in defining the direction and focus of the nation's water resources program," said H. Martin Lancaster, Assistant Secretary of the Army (Civil Works).

"In addition to authorizing important projects such as the Illinois Shoreline project in the Chicago area, and improvements to projects authorized for Everglades restoration, we have included a number of provisions that allow us to use more effectively our available resources.

"The administration also is proposing significant improvements in flood protection for the Sacramento, Calif., area through stronger levees and protective reservoir operations," he said.

"The administration's approach to Sacramento flood protection is affordable and capable of being implemented in a relatively short time, reflecting the need to protect Sacramento while dealing with current budget constraints and the safety and environmental problems associated with other proposals," Lancaster added.

The legislative package proposes increasing the non-federal share of the cost of new structural flood damage reduction projects to 50 percent,

and requires local floodplain management planning and implementation. It further provides for cost sharing on the construction of dredged material disposal facilities for navigation projects.

Provisions are included that would authorize the Corps to undertake significant new initiatives for restoring the environment.

Projects in the draft legislation are:

- Humboldt Harbor and Bay, Calif.
  - San Lorenzo River, Calif.
  - Palm Valley Bridge Replacement, St. Johns County, Fla.
  - Illinois Shoreline Storm Damage Reduction, Wilmette to Illinois and Indiana State Line Pond Creek, Ky.
  - Wolf Creek Hydropower, Cumberland River, Ky.
  - Wood River, Grand Island, Neb.
  - Wilmington Harbor, N.C.
  - Duck Creek, Ohio Rio Grande de Arecibo, Puerto Rico.
  - Big Sioux River, Sioux Falls, S.D.
  - Marmet Lock Replacement, W.Va.
  - American River Watershed, Calif.
- The authorized project modifications are:
- Central and Southern Florida, Canal C-III and Canal C-51.
  - Arkansas City, Kan.
  - North Branch of Chicago River, Ill.
  - Cape Girardeau, Mo.
  - Saw Mill Run, Pa.
  - San Juan Harbor, Puerto Rico.
  - Removal of Navigation Hazard, Seekonk River, Providence, R. I.

## Three earn Presidential Rank awards

Three members of the Corps' Senior Executive Service have received the 1995 Presidential Rank Award on May 16. John P. Elmore, Dr. Lewis E. Link and Richard Armstrong.

The awards recognize government senior executives for sustained exceptional performance.

The awards are given in two categories — Distinguished and Meritorious Executive. For 1995, the President awarded 62 Distinguished awards and 146 Meritorious.

The Distinguished Executive Rank carries a \$20,000 reward. The executive's accomplishments must affect a broad area of science or technology or a major Army program, and be considered among the most significant achievements by Army civilian executives.

Armstrong, Directorate of Military Programs, and Elmore, who recently retired from the Directorate of Civil Works, received Distinguished awards.

The Meritorious Executive Rank carries a \$10,000 reward. The accomplishment must set winners apart from their peers and warrant recognition above that provided by the Secretary of the Army or the Secretary of Defense. Link, director of the Cold Regions Research and Engineering Laboratory, received the Meritorious award.

# Soldier visits Bosnia; writes 'Beat the Mud'

By Diana Bailey  
Norfolk District

A two-month deployment to Bosnia wasn't life-changing for Capt. Mark Arn, but he *did* get a book out of it. Arn, a project engineer for Norfolk District's Fort Lee field office, was on special assignment to Taszar, Hungary, for two months, Jan. 16 to March 16, supporting the U.N.'s peace-keeping mission in Bosnia.

The handbook, titled "*Beat the Mud*," may not keep you up all night reading, but it could improve the quality of life for soldiers in Bosnia or any other area where mud presents a challenge.

"I'd already been to Saudi Arabia for seven months where there's no TV or phones and living conditions are pretty basic, in an environment where there's not a lot to do besides the job," Arn said. "So I had already learned to appreciate things at home."

## Road warriors

Arn was one of a group of 18 Army officers, enlisted and civilians, some of whom became "road warriors" for Brig. Gen. Robert F. Flowers, Commander of the Lower Mississippi Valley Division. Their job was to travel the transport routes from Tuzla, the intermediate staging base, to the various base camps throughout Bosnia.

"General Flowers told us our mission would be to get over there and get things going on those base camps," Arn said.

From Tuzla, Flowers' staff of road warriors would drive to one or two of the base camps and assist deployed units working to set up life support areas for troops assigned to maintain the zone of separation. This zone is designed to keep the former fighting factions in Bosnia separated long enough to establish peace.

## Civilian support

The international firm of Brown and Root holds the service contract to build the life support areas. In addition to ensuring the travel routes from Tuzla to the base camps were adequately maintained, the road warriors' assignment included making sure Brown and Root fulfilled their contract.

The contract includes setting up tents and galleys, putting in lighting, building helicopter landing zones, vehicle parking areas, even modular bath facilities.

"I learned how contracts are coming into play in the military," Arn said. "The contractor does a lot of the support work for the military, allowing the soldiers to focus on their mission. These contractors have their own cooks, laundry and bath units. It's a good, quick way of getting things done but with less deployment of soldiers."

He also sees advantages to the service contract because it provides indirect aid to the affected country.

"Brown and Root is hiring the locals who are desperate for work, and the labor is cheap," Arn said. "At Camp Alicia, one of the base camps, I heard that one of the local men walked 10 miles back and forth each day so he could have a job."

## Mud problems

Arn didn't get to travel as much as he expected, however. Early on, based on his experience as a soldier and construction expert in Virginia, where spring rains also make things soggy, Arn was

pulled off the road warrior team to work on coping with the spring thaw.

"In January, things were still frozen, so we were looking at how we could improve the roads when spring comes," Arn said. "The roads weren't very good anyway, because the fighting has gone on so long. But putting all those convoys on the roads made things worse." Mud in the base camps also complicated setup.

For the next two months, Arn and his co-workers at the issue plans office in Tuzla looked at techniques to stabilize the soil and deal with excess water. Arn wrote "*Beat the Mud*" based on their findings.

Dr. Al Bush, of the Waterways Experiment Station in Vicksburg, Miss., co-authored the guide and is working to publish it for a broader audience.

## Solutions

The handbook is practical and results-oriented. The first recommendation is to dig ditches and culverts to drain water from the site.

The handbook addresses additives that could stabilize the soil, including lime, Portland cement, asphalt and fly ash. It also recommends using geotextiles to provide greater stability in the mud and cut down on the aggregate needed to build helipads, sidewalks, roads and parking areas.

Lack of aggregate is a big construction challenge. "The fighting has gone on so long that all the quarries have shut down, so we not only needed to look at different ways to stabilize staging areas, helipads and roads, we also had to find alternate sources for aggregate, such as Croatia and Hungary," Arn said.

Besides geotextiles, the plans team also studied and recommended other forms of stabilization, such as concrete blocks, sandbags and UNI MAT. UNI MAT is essentially several pallets that are interlocked, creating a stable surface for vehicles and equipment.

# BAMC

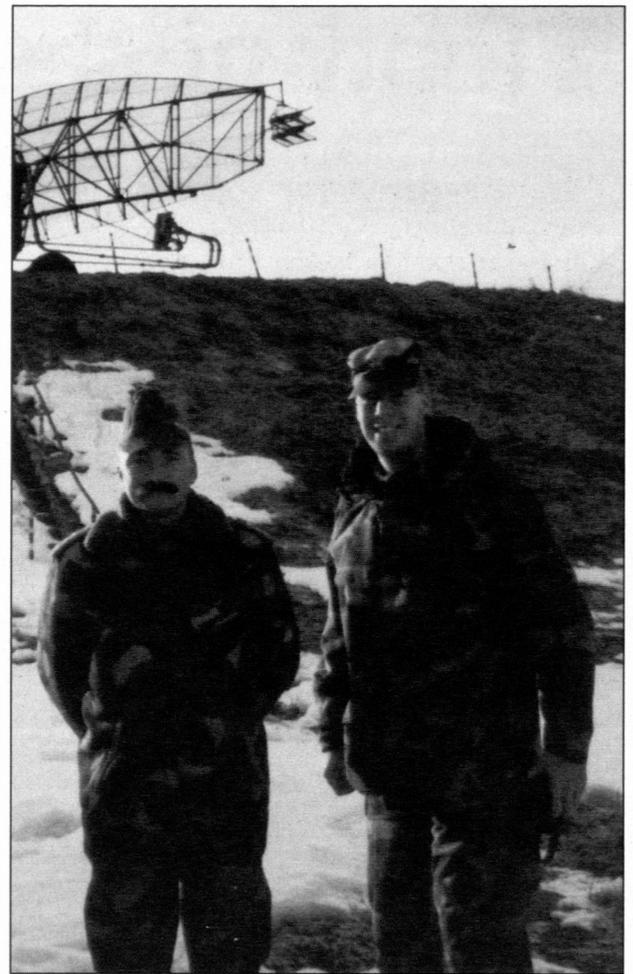
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Womack Army Hospital.

One benefit of partnering was reducing the amount of correspondence between the contractor and the Corps. According to Rowe, the number of letters written between the contractor and the Corps on the new BAMC was one-tenth the number written on previous jobs. Rowe said that, while some of this may be attributable to the quality of the design, much of the credit goes to partnering.

"A basic precept of partnering is making decisions at the lowest possible level," Rowe said. "Solutions to many problems discovered in the field are handled by the contractor and Corps personnel at the site before they develop into major obstacles. This proactive approach eliminated unnecessary delays in addressing issues which may be time-sensitive and have the potential of delaying progress of the overall project."

Partnering at the new BAMC contributed to many initiatives. One was placing a "mud slab" (two inches of unreinforced concrete covering the soil beneath the hospital) to avoid delays which would have been caused by muddy working conditions during one of the wettest years on record in San Antonio. A side benefit is that maintenance personnel now have a relatively clean crawl space to work in during operation and maintenance.



Capt. Mark Arn, right, and a Hungarian air force colonel tour a Hungarian air defense site. (Photo courtesy of Norfolk District)

Everything built also has to be temporary, Arn pointed out, "because it will have to be pulled out in a year."

## Resilience

As for Bosnia as a whole, Arn said things seem to be looking up.

"It's amazing," he said. "Driving down the road, you see kids coming back out to play and, even after all they've been through, they're neat and well-dressed. These people's homes may be blown up, but as soon as they're allowed back in, the next day there's laundry hanging in the window."

On a project of this scope, it is common to employ the designer's services to address issues that arise during construction. Rick Lee, the A-E representative from HKS, stayed on-site at the resident office to assist in addressing issues. He also coordinated the efforts of the design team in answering questions, making design changes and periodically visiting the site.

Engineering Division also provided a full-time representative who administered the A-E contract and acted as liaison to the district office for other support.

Finally, the Health Facility Planning Agency provided a full-time staff to represent the users — BAMC, the Office of the Surgeon General and the U.S. Army Institute of Surgical Research. The local Health Facility Planning Office staff coordinated all user-required changes to the new facility and user training of the new systems. Staff members also helped the Corps and the contractor understand the users' requirements. This kept minor changes in the construction from occurring which would have resulted in problems later.

Although the facility was turned over to the user on July 18, 1995, the new BAMC celebrated its official grand opening on March 14. The ceremony featured military displays representing the units BAMC serves, a ribbon-cutting and an exhibition by the Golden Knights, the Army's parachute demonstration team.

# TEC builds naval facilities in Egypt

By Joan F. Kibler  
Transatlantic Programs Center

The Egyptian navy continues to improve its facilities at the Ras El-Tin navy base, thanks in large part to the efforts of the Alexandria Resident Office (ARO)

The ARO, part of the Transatlantic Programs Center's (TAC) Egypt Area Office, is completing a \$12.4 million contract for ship repair and ship support facilities, and has an \$11.1 million contract for a replacement pier in progress. Both contracts were awarded to Contrack International Inc. The ship support/ship repair facilities were designed by the architect-engineer firm of STV.

"Under the \$12 million contract, we're finishing new facilities that support an already existing shiplift and ship repair operation," said Barry Morley, Alexandria resident engineer. "We're also completing major modifications to existing buildings in the shipyard."

The shiplift facility raises ships out of the water and transfers them to drydocks for maintenance and repair. A series of synchronized winches control the lift operation.

## Additional capabilities

The Corps supervised construction of the original shiplift and ship repair facilities at Ras El-Tin 1988-92.

"These facilities have given the Egyptian navy the capability to conduct emergency and short- or long-term repairs to ship hulls, steering gear (rudders), and propellers," Morley said. "Since May 1992, the facility has lifted more than 500 Egyptian navy ships for repair and maintenance. The navy is running a first-class repair operation."

The navy base is next to the Ras El-Tin palace, former home of King Farouk. It's also across from the Alexandria commercial port.

"The area selected for the shiplift facility and its support structures is land reclaimed from the sea, requiring careful design and construction," Morley said. "For this reason, most of the structures are built on reinforced, concrete-filled steel piles, capped by a concrete slab."

The facilities under construction will give the Egyptian navy additional capability.

All ARO team members credit the teamwork they've built with the Egyptian navy, the contractor and each other.

## Ship support facilities

The largest building in the contract, the structural fabrication shop, will be used to repair ship hulls and shaped structural components. The shop connects to an outside storage area for raw materials via a 25-ton overhead crane that can move the materials to the various fabrication stations in the building.

"We acquired specially-made reinforcing rod for the structural shop from the U.S.," Morley said. "Because the rod was so long, it was difficult for the shipper to get it on a suitable vessel. This resulted in a delay in completing the building cast-in-place beams but, because of Contrack's efforts, we got the job back on track."

"Once the building was constructed, we installed heavy sheet metal cutting, bending and pressing equipment," said Bill Ricketts, quality assurance manager. "After commissioning the equipment, the contractor trained the navy operations staff."

Smaller metal cutting, milling, shaping and welding machinery is located in a parallel bay with a five-ton overhead crane for material handling. The facility also has administrative areas,



This pier is under construction at Ras El-Tin naval base in Egypt, where the Alexandria Resident Office is building ship repair and support facilities. (Photo courtesy of TAC)

a laboratory and storage. A recent request from the Egyptian navy will convert the storage area into gauge and electronic testing, calibration labs and office space.

Other new facilities completed under the contract include woodworking, painting and paint storage areas in a two-story set of adjoining structures.

"The woodworking shop has sophisticated planing and sawing machines for shaping the wooden bilge cradles used in the shiplifting operations," Morley said. "To minimize the fire hazard, the shop also includes an elaborate sawdust and chip vacuum system."

"The painting and paint storage areas also involve potential for fires, so we installed a wet pipe sprinkler system complete with fire pump and controls. About half of this area required explosion-proof electrical fittings as well," Morley added.

## Electroplating shop renovation

While the new construction had its challenges, Morley said renovating the electroplating shop was the most difficult and technically complex. It involved the demolition, repair and reconstruction of a facility built at least three decades ago using Russian designs.

"The work was made more complicated by environmental concerns," Morley said. "In simple terms, ship components that require electroplating move through this facility via various conveyor systems that do everything from lifting objects being plated and moving them from one vat to another, to transferring dangerous materials to a treatment building where liquid and gaseous wastes are treated to eliminate the health hazard."

"Environmental protections are a must for the silver plating room, but not as critical for the chrome plating room which doesn't produce the dangerous gases," Morley explained. "The system also has a double containment pipe system for protection in the transfer of liquid plating wastes, via an overhead bridge structure."

Morley said the demolition activities also included the removal and disposal of chemically contaminated soils under the demolished plating tanks.

Other buildings at the navy base also had modifications under the contract, including a machine shop, engine repair facility and foundry.

## Replacement pier

The 315-meter replacement pier, known as Quay 3/4, is scheduled for completion by July and will be able to dock four frigates.

"The pier will provide shore-based utilities while the ships are moored here," Morley said. "The pier has utility tunnels above the surface on both sides, lights down the center, and hotel stations providing various utilities such as steam, electricity, sewer, compressed air and potable and demineralized water. The utility buildings to accommodate the utilities in the hotel stations are located on shore."

## Success story

"An integral part of the construction progress on these projects is due to the cooperation and assistance of the Egyptian navy," said Terry McGiverin, chief of Project Management Division E. "The navy, the contractor and TAC have developed solutions to many situations that could have impeded construction. Some examples are extended hours during holidays, expeditious customs clearance, and shared investigation of existing utilities."

"In addition, the Egyptian navy routinely trusts the Corps to provide the highest quality facilities and therefore doesn't have daily interaction with contract management," McGiverin added.

McGiverin said that additional facilities expansion work at Ras El-Tin is possible as the Egyptian navy acquires new weapons systems. Additionally, the Transatlantic Programs Center is soliciting firms interested in submitting offers for building a new pier and related on-shore support facilities at Abu-Qir navy base, east of Ras El-Tin. Both piers were designed by Mobile District and in-house personnel.

*(Editor's note: This article would not have been possible without the significant contributions of Barry Morley).*

# New ASA(CW)

## Lancaster discusses his job, restructuring and the future of the Corps

Interview by Bernard W. Tate  
Photo by F.T. Eyre  
HQUSACE

**Exactly what does the ASA(CW) do? What is your job description?**

The ASA(CW) is the civilian oversight of the civil works side of the Corps of Engineers. In the chain of command, he would be between the Chief and the Secretary of the Army. The ASA(CW) is a political appointee who articulates the Corps' civil works policy, then advocates that policy before Congress. The ASA(CW) works with the administration in establishing budgetary and policy initiatives for the Corps.

**Did you come to this office with any clear mandates you need to accomplish?**

No specific mandates; they were more of a general nature. I think I was chosen for this job because the White House recognized that this is a particularly crucial time for the Corps in setting its course for the future.

Last year the White House proposed several policy initiatives for the Corps that were not well received in Congress. But the White House recognized that, with the pressures of balancing the budget and downsizing government, there had to be some changes in the policies that underlie the Corps' mission. Therefore, they needed someone who could articulate the administration's policy initiatives to Congress. Someone who, because of his or her relationship with Capitol Hill, could engage in the debate about the Corps' future.

I think there was a conscious effort to put someone in this job who could do all that. So I see that my major focus is to engage in a high-level policy debate and to be the interface between the White House and Congress in fashioning the Corps' future course.

**So your experience of serving in the House of Representatives will serve you well in your present job?**

I hope it will serve us well. Thus far, the reception I've gotten in private meetings on Capitol Hill and in hearings before Congressional committees and subcommittees indicates that members of Congress are pleased to have a person in this position who has that background, a person who is a friend of many people we will have to deal with.

And I think there's been a warmer reception on Capitol Hill for the administration's policy initiatives this year than last. That may also indicate their willingness to work with me because of my background.

**Do you have any personal goals you want to achieve?**

I want to make certain the Corps maintains its historic role as the nation's engineer, as the preeminent builder of the nation's infrastructure, and as a contributor to the national defense. We are in a critical time when one or more of those broad goals might be in jeopardy. As budgets are reduced and the federal workforce downsizes, unless we change the way the Corps does business, or unless we can reverse some of the cuts, we could easily find ourselves being an agency that only operates and maintains what we've built in the past. We might not be a force for the future.

As I've repeatedly said in public and private statements since I've been in this job, the Corps of Engineers is one federal agency that can demonstrate that our projects return more to the federal treasury than we receive. We build investments for the future rather than simply receiving tax dollars which have no return on them.

**What do you think is the Corps of Engineers' greatest challenge for the foreseeable future?**

Our greatest challenge is how we respond to inevitable budget and workforce reductions. I believe we can continue to play a vital, positive role in the future through better resource management, by leveraging technology like new construction techniques and new design techniques, and by better using our personnel. In short, by changing the way we do business in some ways while maintaining our core roles.

Clearly flood control, navigation, environmental restoration, shore protection and other missions will continue to be vital to this country. So we need to make certain we can continue to do what we have done in the past and still make a positive contribution to the future.

One of my goals is to significantly expand our support for others program, which I believe is an opportunity for the Corps to use its incredible expertise to keep itself a strong and viable organization. We are often called on to do things for others simply because we are the nation's engineer and have this incredibly talented workforce. People come and ask us to do all manner of things which we are capable of doing but which, if we just stuck to our traditional responsibilities, we would probably never get into.

**Everyone was surprised by how long it took to fill this job with a full-time ASA(CW). How will that impact the way you and this office functions?**



H. Martin Lancaster, ASA(CW), talks with Command Sgt. Maj. James E. Skellion, now retired, at the 1996 Commanders Conference.

First let me say that, for the past two years, John Zirschky has done a great job in a difficult situation. To be thrown into the acting ASA(CW) at a young age with little background with the Corps was an incredible challenge. Dr. Zirschky did a great job meeting that challenge.

But clearly Dr. Zirschky was always at a disadvantage being an acting ASA(CW). That negatively impacted the Corps, which placed greater pressure on me to respond to pent-up demands from individuals, organizations, project sponsors and governments all over the country. So, yes, it made my job more difficult than if I had come into it as a confirmed assistant secretary soon after the president took office.

But since Dr. Zirschky did a good job, and because we are trying hard to create a team between this office and Corps headquarters, I believe we will more than adequately face those challenges.

I've been gratified by the warm and positive reception I've received from the Corps and its leadership. I think we're well on the way to catching up the time we lost during that period when we didn't have a confirmed person in this position.

**Have you had any direct contact with the Corps in the past?**

As a congressman representing a coastal district, I had significant interface with the Corps, which was always positive. The Wilmington Dis-

trict is an excellent office and I had a wonderful relationship with them. That's why, when the White House contacted me about this position, I was so enthusiastic to become involved with the larger organization.

Since I had such a good working relationship with Wilmington District, I came to this job with a positive impression about the Corps' capabilities, traditions and background.

**Have your impressions of the Corps changed since you became ASA(CW)?**

If anything, I'm more impressed because I have a greater breadth of knowledge about the capabilities of the Corps and the talents of the individuals who make up the organization.

It's an incredible group of people who are hardworking and dedicated. I'm very proud to be the assistant secretary providing civilian leadership to such a good organization.

**Have you learned anything surprising about the Corps?**

Only perhaps the incredible breadth of problems the Corps is called on to provide solutions for. As I indicated, my involvement with the Corps had to do with coastal North Carolina. So, many aspects of the Corps program were not relevant to that congressional district. If there's been a surprise, it's been the incredible number of challenges the

Corps faces daily and handles with such expertise and effectiveness.

**Some people speculate that since the Corps does so many Congressionally-funded civil works, Congress should remove us from the Army and make us a Federal Department of Civil Engineering. What's your opinion?**

I don't think it's a good idea. First, we have an important national security mission that would be lost if we did. The Corps of Engineers, in times of military or national crisis (disasters or otherwise), is called on to serve this country. Because of our civil works program, we're able to maintain engineering skills that can be mobilized in a crisis. If we became just an organization of federal engineers that provided ordinary kinds of engineering expertise, we might not be ready to provide that assistance.

Furthermore, it gives our organization greater credibility to be part of the Army, an organization with its own reputation. I think, when the Corps goes into a community to do a project of any kind, carrying that imprimatur of the Army gives us a credibility that we might not have if we were just part of the federal bureaucracy.

**So you feel that our civil expertise and our military expertise are so closely intertwined that they can't be separated?**

I don't think you would want to

separate the two. The country is not in constant military or national crisis, but you never know when we will be.

The Corps originally got the civil works function because the Army, at the time, had the only engineering academic program in the country at West Point. The country recognized the need for engineering skills during military or national crisis, but also recognized there were periods between these crises when military engineers were not going to be fully used.

This was an expanding country at the time that needed major infrastructure. We were expanding into areas where the environment was hostile due to flooding and other natural phenomena which had to be tamed if the country was to develop.

So the Army Corps of Engineers offered expertise to a growing country during those times between national crises. That continues today. When national security needs our engineers to play an important role, they can do it. Then those same engineers can use those same skills in peacetime.

**Restructuring is one of the most important issues for Corps people. Is there anything you can tell us about that?**

The district restructuring guidance has been approved by the Secretary of the Army for his approval right now, and the division reorganization mandated by Congress is before the Secretary for his consideration.

I forwarded both to the Secretary with my endorsement. We believe that both have been well thought out and well-planned and are fully supportable by all the relevant factors that will come into play. We believe that the Secretary will ultimately approve the recommendations of the Chief.

**Are there any words of reassurance or encouragement you could pass on to people in the field?**

As I indicated earlier, one of the pleasures of this job has been getting to know the incredible workforce that is the Corps. That is an asset that I think is important for us to maintain.

So I want the Corps family to know that, because I'm so impressed with their capabilities and what they do on a daily basis, I really want to be an advocate for them at the White House and in the Congress so we can continue to play an even more important role in building our country and its infrastructure, protecting and restoring its environment, keeping our farms and communities safe from flooding, and in keeping our country strong and safe in the future.

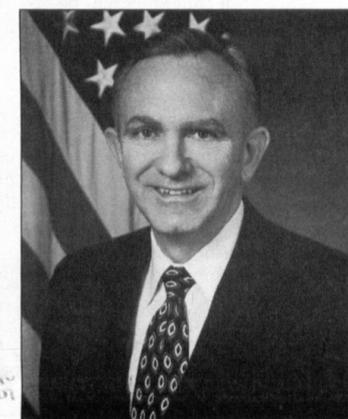
## Lancaster has long and varied career

H. Martin Lancaster was confirmed and sworn in as Assistant Secretary of the Army (Civil Works) in January. Immediately before that, he served as the Special Advisor to the President on Chemical Weapons. Lancaster served as a member of the U.S. House of Representatives from 1987 until January 1995. From that time until his assumption of duties as Special Advisor to the President on April 1, 1995, he was a Special Assistant to the Governor of North Carolina, James B. Hunt, Jr., advising and assisting him with federal issues.

Lancaster was born and raised on a tobacco farm in Wayne County, N.C., and graduated in 1963 from the University of North Carolina (UNC) at Chapel Hill. He received his law degree from the law school of UNC in 1967 and immediately began service as a judge advocate in the Navy. He was assigned briefly to the 12th Naval District in San Francisco before being assigned as the Staff Judge Advocate for the USS Hancock (CVA-19), then deployed to the Gulf of Tonkin off the coast of Vietnam.

After two cruises to Vietnam, Lancaster completed his active duty in the Navy and the Naval District Washington. He continued as an active Reservist until his retirement as a captain in November, 1993.

After his release from active duty, Lancaster returned to his hometown of Goldsboro, N.C., and entered the private practice of law with a former law school classmate, Philip A. Badour, Jr., a relationship which continued until Lancaster's election to Congress. He was involved in a number of civic endeavors including serving



as Chairman of the North Carolina Arts Council, President of the Community Arts Council and of the Wayne Community Concert Association, Chairman of the Board of Trustees of the Wayne County Public Library and of the Goldsboro/Wayne County Bicentennial Commission.

In 1978 Lancaster was elected to the North Carolina House of Representatives where he served until his election to Congress. In his second Congressional term, he chaired the Committee on Highway Safety and in his third and fourth terms chaired the Judiciary Committee. During his last two terms, Lancaster was rated by the North Carolina Center for Public Policy Research as the fifth most effective member of the House of Representatives.

Lancaster and his wife, Alice, are the parents of two daughters — Ashley, a freshman at UNC, and Mary, a senior at George Mason High School, Va.

# Corps returns remains to tribes

Article by Karen Chaney  
Photo by Alfred Dulaney  
Vicksburg District

Native American tribes in Arkansas, Louisiana and Mississippi are being given the opportunity to claim the remains of their ancestors from burial sites that were excavated during construction projects in the last 20 years.

Vicksburg District recently notified the chairmen of six tribes in the three-state area that they will be offered the opportunity to demonstrate lineal descent, claim the remains and rebury them.

The notification of the tribal officers is part of the Corps' compliance with the Native American Graves Protection and Repatriation Act (NAGPRA). The purpose of the act, according to Corps archeologist Sheila Lewis, is to give Native Americans an opportunity to claim ancestral human remains and associated funeral objects.

Tribes in Vicksburg District who received the notification were the Choctaw, Chickasaw, Quapaw, Caddo and Tunica-Biloxi.

According to the letter, a Corps contractor, R. Christopher Goodwin and Associates, has been working since October 1994 to inspect the 145 archeological collections and 20 repositories storing materials from projects either funded or completed by Vicksburg District. They found that material from 16 of the collections contained human remains.

Those 16 collections will now undergo a complete NAGPRA inventory to determine the condition of the remains and to identify any associated funeral objects. Two collections still must have preliminary assessments which include washing and labeling. Most of the remains were found in Louisiana and Arkansas.

According to Joe Sigrest, the environmental specialist who handles cultural resources for the Corps'



Elizabeth Davoli, a co-op student from Louisiana State University, and Sheila Lewis, archeologist with Vicksburg District, examine some of the Indian artifacts collected during the past 20 years.

Lower Mississippi Valley Division, regulations are now being drafted which will establish the procedures to document tribal descent.

"It really depends on how many tribes claim these remains," Sigrest said. "We are hoping to let the tribes make the determinations themselves, but we will assist them in

any way we can.

"All federal agencies are being required to do this," said Sigrest, whose responsibilities include three other Corps districts besides Vicksburg. "It is being implemented Corps-wide, with a fall deadline for completion of the inventory and notification of the tribes."

# Teaming gives workers more responsibility

By Betty Neff  
Engineering and Support  
Center, Huntsville

"I want you to put me out of a job," David Douthat told his employees as they reorganized his Ordnance and Explosives Directorate into teams.

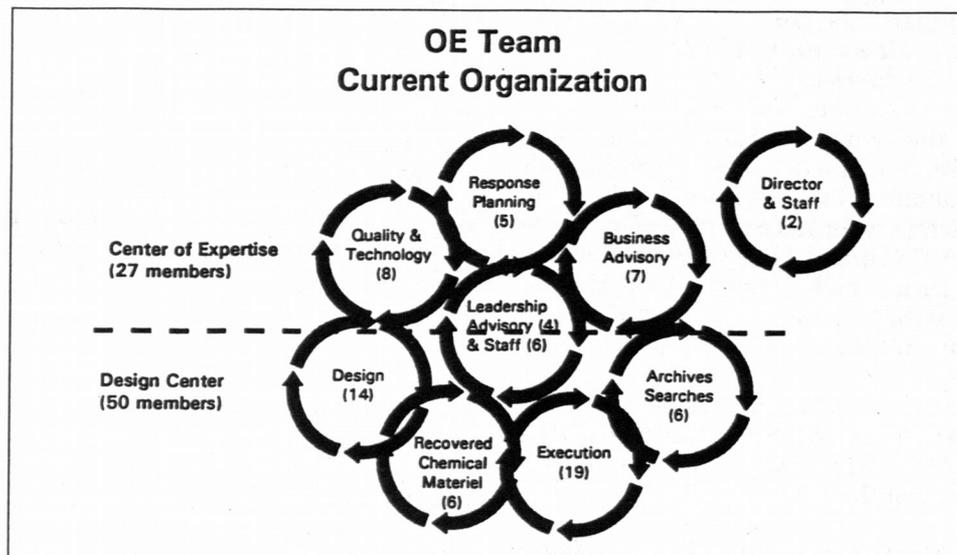
Douthat, a firm believer in teamwork, isn't afraid of losing his position as director since "teaming" and "employee empowerment" have become bywords at the Engineering and Support Center, Huntsville. Douthat simply sees the supervisor's role changing as teams take more responsibility.

"As a supervisor, you should provide the leadership, mentor your employees, chart a path into the future, and find new opportunities for the team," Douthat said. "Teams make the day-to-day program decisions because they are closest to the work."

Why is Huntsville turning to teams?

"The things I've seen done well in organizations tended to be by small groups, with each person bringing some skill to the effort," said Huntsville Center Commander, Col. Walter J. Cunningham. He believes teams reduce traditional corporate barriers that create inefficiency. "Energy is wasted moving across those barriers."

Cunningham is right. *The Wisdom of Teams* by Jon R. Katzenbach and Douglas K. Smith says, "Teams outperform individuals acting alone or



in larger organizational groupings, especially when performance requires multiple skills, judgments and experiences."

Such diversity is apparent at Huntsville Center where the Information Management (IM) Directorate and the Ordnance and Explosives Directorate are reorganizing under the team concept. The process is "both exciting and frustrating," said Laveda Lofton, an IM team leader.

Restructuring a traditional ladder-and-stovepipe organization into a network of open communication links isn't an overnight process. "The transition to self-directed teams takes one to three years," said Jeff Neece, a Huntsville team designer.

Where do you start? "You have to have each member's personal com-

mitment to make the team work," said team leader Mickey Beavers.

Although it has been only a short time since Douthat's directorate established new work teams, he is pleased with the transition. "I thought there would be more turmoil at this point," Douthat said. "I think the reason things are going so well is the employees are ready for teaming. They want it; they see it as empowerment. So there's a desire, a personal commitment, to make it happen."

But an orderly transition takes more than desire and commitment, a lesson Huntsville's Ordnance folks learned last July when they first became a directorate.

"Probably our biggest mistake was calling ourselves a team before we were ready," Douthat said.

"First we needed to ensure that everyone understood the team concept, that everyone was committed."

After a false start, the Ordnance Team reevaluated its approach. To elicit employee and management commitment and to facilitate the teaming process, the Ordnance Team selected a training program that uses in-house trainers.

Built on 20 concise, self-paced modules, the training program teaches team-building concepts such as handling conflict, understanding personal styles, building trust, developing a mission statement, improving work processes and establishing performance measurements.

With a training program in place, the Ordnance Team defined team structure, goals and boundaries.

"We based the plan on where we'd be five years from now, making it flexible enough to accommodate changes," Neece said. Similarly, Information Management also used a team of coworkers to define team functions, structure, responsibilities and work flow interaction.

Perhaps the most striking feature of the teams' new organizational and work flow charts are the circles, a constellation of linked circles signifying a network of open communication.

The Ordnance Team creates those communication links in several ways. One way is through a buddy system. "Team members always have a buddy or backup for what

Continued on page 9

# Computer program identifies 'good' bugs

By Christina Plunkett  
Jacksonville District

Unless you're into fly fishing, you probably think of bugs as nuisances to be whacked or sprayed to death. But some people's daily bread-and-butter is identifying thousands of insects, what plants they eat, and ensuring the bugs feast on exotic nuisance plants.

These aquatic plant control field operators and biologists, by developing biological control management of aquatic nuisance plants, help keep the nation's rivers and lakes free-flowing.

Insects have proven to be an effective, safe way to control the ecological damage caused by some exotic plants' growth. A recent development in biological control technology should aid the operators and biologists in their job.

This development is the nation's first computer-based biocontrol information/expert system, which places specific biocontrol information literally at the operator's fingertips.

Funded by the Corps of Engineers, this unique system was developed by the Waterways Experiment Station (WES) and the Department of Agriculture's (USDA) Aquatic Plant Management Laboratories in Fort Lauderdale and Gainesville, Fla.

This idea was first entertained about five years ago between Jacksonville District's Aquatic Plant Control Operations Support Center (APCOSC) and WES's Aquatic Plant Control Research Program, said Dr. Bill Zattau, Chief of APCOSC. The idea resulted in a "short course" to accompany the information/expert computer system.

The system incorporates 341 full-color images illustrating the history of exotics in the U.S. and the development of biocontrol technology for the management of four major exotics—alligatorweed, hydrilla, water hyacinth and water lettuce.

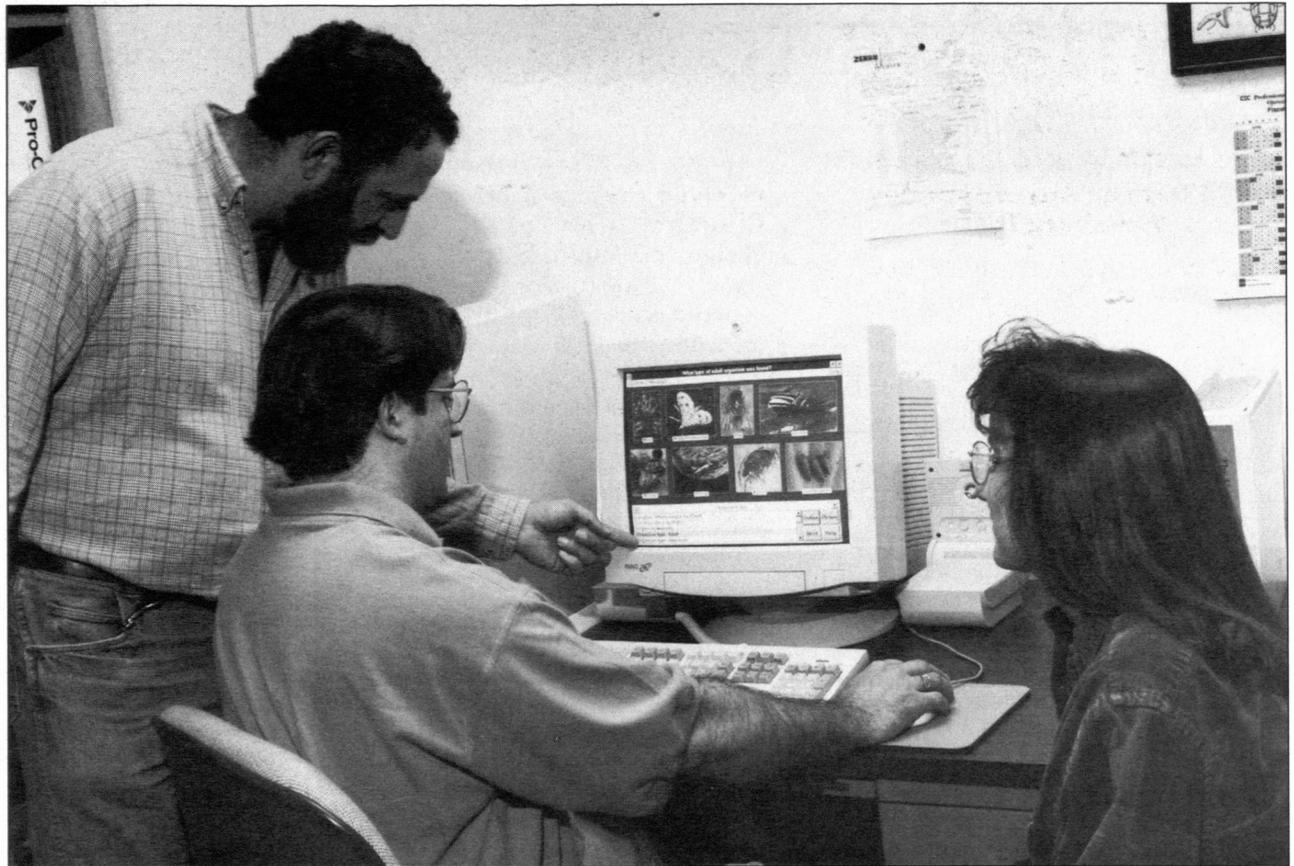
Especially significant is the ability to identify the native and imported insects that feed on these plants by answering a series of simple questions about the plants.

Also included is information on problems caused by aquatic plants, the damage the insects cause to the plants, the insects' life histories, and data collection methods.

In the short course, titled "The Use of Biological Control for Aquatic Plant Management," participants learn historical information and facts and review how to operate the information/expert system. The attendees include field operators and biologists from Florida Water Management Districts, the Florida Department of Environmental Protection and district personnel.

Christine Bauer, a biologist with APCOSC, and Yvonne Haberer, South Florida Operations Office, walk field operators through the system, showing them how easy it is to use the program to identify insects and the plant damage they do.

"The short class and accompanying information system will help those working in biocontrol who are not entomologists, or don't work with insects



Dr. Michael Grodowitz, Waterways Experiment Station (left), and Lavon Jefferies and Sherry Graham of computer Sciences Corp., demonstrate the great detail included in the biocontrol information/expert system they created. (Photo courtesy of Jacksonville District)

regularly, identify the damage caused by a particular insect," Bauer said. "It will also help operators differentiate between native species and introduced insects that are host-specific.

"All the attendees are excited about the realistic, detailed illustrations of the insects," Bauer said. Each identification section includes illustrations and definitions. The program allows the operator to scan anything from an insect's feeding location on a plant to its wing and body specifications.

"With this program, the operator can now tell with the naked eye which insect is feeding on an exotic," Bauer said.

For example an operator needs to tell the difference between a native fly and the introduced hydrilla leaf mining fly used to control hydrilla in Florida, Louisiana and Texas. With this system, an operator can see that the native fly's abdomen is longer than its thorax, while the introduced fly's abdomen and thorax are the same size.

The system received national acclaim during a one-year testing phase when it was demonstrated to state and federal agencies throughout the country, said Dr. Michael Grodowitz, a research entomologist at WES.

As word spread about this unique system, agencies and organizations throughout the country have expressed interest in getting a copy. "We even received a call from the Institute of Biologi-

cal Control in Washington, D.C., requesting information," Grodowitz said.

Biological control management of exotic aquatic plants in the U.S. formally began in 1959 when the Corps and USDA entered an informal cooperative agreement to study the possibility of using biological control to manage alligatorweed and water hyacinth. Since the initial agreement, 12 insect control agents have been introduced and released on four problem exotic aquatic plants and have established populations in 11 states. Currently, five additional insects are in overseas and quarantine labs being tested for future management tools on hydrilla, Eurasian watermilfoil and melaleuca.

Not only has the U.S. benefited, the biocontrol technology developed here has been applied to aquatic plant problems in 25 other countries.

Creation of the biocontrol short course and information system has prompted development of other information/expert systems, Grodowitz said. Currently, three are being developed.

One is an expanded version of the current system which will include 13 more plants and the insects that feed on them. The number of insects examined will also increase from 23 species to 55 with the expanded system.

A second system, also funded by the Corps, is about managing zebra mussels. It will review the life history of zebra mussels, identification strategies, and the mussels' distribution and means of dispersal throughout the U.S. The system will also include types of control methods used, and a list of vendors for purchasing equipment and supplies to manage this increasing menace to the nation's waterways.

The third system, funded by the Strategic Environmental Research and Development Program, concerns noxious and nuisance plant management on military installations. This system is being designed to give operational personnel access to information on problem plants. It will identify what plants are considered noxious or nuisance plants in each region and methods available for control.

## Teaming

they do," Douthat said.

The buddy system improves customer care and is critical for a smooth transition to a team structure. "Even though an individual hands off a project to his or her buddy, the first individual continues as backup," said Douthat.

Ordnance also links its teams through the star system. Each team member is responsible for a team value, such as quality. When a quality problem arises in one circle, the quality leaders from all the Ordnance teams meet to address it before

it adversely affects other circles.

Other methods of linking teams include cross-training and rotational assignments. "Theoretically, everyone on the team should be able to do every job," Douthat said.

"The transition has released tremendous energy," Lofton said. "A lot of people have fresh ideas and contributions to make. Teaming not only allows people to contribute; it requires them to. We can't go back and we don't want to."

# Sign language classes ease communication

By Ann Marie Reyes  
New England Division

Members of New England Division (NED) are learning a different language. It's not Spanish or French, but American Sign Language. The class, held Tuesday and Thursday mornings in the Visitor's Center, will give them the skill to communicate with NED's deaf and hearing impaired employees.

According to Jerry Nunziato, Disabilities Program Manager, Joe Lampara approached him with the idea.

"Two of his employees are deaf or hearing impaired," said Nunziato. "After I heard from Joe, Colonel Richardson suggested a class, and I decided to pursue the possibility."

Nunziato coordinated with the Human Resources Office at the Cold Regions Research Laboratory to classify the sign language class as official training. Mary Christopher, Information Management, agreed to teach the class for free.

Limited to 10 people, the class is progressing nicely, according to

Nunziato. Although only a few sessions have taken place, the students are beginning to sign full sentences.

"At first it was a little hard, but Mary is a great teacher," Nunziato said. "She quizzes us all the time and there's homework."

Janet Braden, Logistics, is participating in the class because Christopher and Bob Essex, a hearing impaired employee, often go down to the warehouse to pick up supplies. Before taking the class, Braden had to write notes to communicate with them. She hopes the class will enable her to communicate better.

"I like the class," Braden said. "Mary covers a lot of territory, and she's very funny. She really gets animated in front of the class."

Kerin Valente is also in the class. She used her knowledge of signing to help Nunziato during a recent Disabled Employees Program meeting. "She did very well," said Nunziato. "She was a big help."

"I was really nervous," said Valente. "But Mary and Bob made me feel comfortable and helped me."

Valente is taking the class be-



Mary Christopher shows the class what phrase to sign next. (Photo courtesy of New England Division)

cause she wanted to bridge the gap of communication between herself, Mary and Bob. "I always see them in the hallway and I wanted to be able to talk to them," she said. "The class is fun and Mary makes it very comfortable to learn."

Nunziato believes this class not only gives the students a chance to clearly communicate with Christopher and other deaf and hearing impaired people, but it also opens up doors for people who can't hear.

"Mary and Bob now have 10 more people they can talk and joke with," Nunziato said. "That's important."

The class is scheduled to conclude during the last week in July. At that time, students will graduate and should be able to sign enough to get their point across. Nunziato hopes to pass out the certificates at a future town meeting.

According to Nunziato, if this class is successful, future classes may be planned.

# Saving energy pays for Sacramento District

Article by Herb Nesmith  
Photo by Ray Hayes  
Sacramento District

How would you like to realize a 100 percent return on your investments? You can. Just add a few words to your scope of work, fill out a simple application form, then sit back and wait for the money to roll in.

Sound too good to be true? Well, it happened in Sacramento District.

In California, most new buildings must comply with the State Energy Efficiency Standards. The

Public Utilities Commission authorized utility companies to offer customers cash incentives as rewards for high-quality, energy-efficient designs exceeding the standards. The benefits to the public are reduced electric generation, lower air emissions and conservation of resources.

Back in 1991, Ray Zimny, an engineer with Sacramento District, was paying his utility bill at a local office of the Pacific Gas & Electric Company (PG&E). He picked up a brochure on energy-saving equipment and "saw the light," so to speak. Why not get rebates for government customers planning construction or renovation at federal buildings? Or at least use the California standard to reduce energy use in federal buildings?

Zimny did some research. He found that Executive order 12759 of April 1991 mandated agencies to reduce energy consumption in all federal buildings. It also encourages agencies to participate in utility energy programs.

So Zimny called PG&E and his architect-engineer (A-E) design consultants to discuss energy conservation.

Because his projects were located throughout the district, Zimny asked PG&E to have just one person as the point-of-contact at its headquarters. This would speed up project review. He told A-Es they should be eager to gain first-hand experience in state-of-the-art energy-savings design, with PG&E assistance, at no additional cost to the government.

Zimny's research led him to the Energy Policy Act of 1992 (PL 102-486). The act allows agencies to accept cash incentives and other services from utility companies under energy-savings programs.

The law set a deadline of January 2005 for federal agencies to install energy-efficiency improvements that would pay for themselves within 10 years. The lower operational cost, combined with the rebate, means the total energy equipment package for a new building or a major renovation can easily be designed with a payback period of 10

years or less.

Zimny's next project where energy-saving design could come into play under the rebate plan was the Western Regional Training Site for Intelligence complex at Parks Reserve Forces Training Area (RFTA) in Dublin, Calif. The A-E firm of Corlett, Skaer and DeVoto of San Francisco saw that the rebate program could aid them with other clients and agreed to coordinate their building design with the PG&E incentive program guidelines.

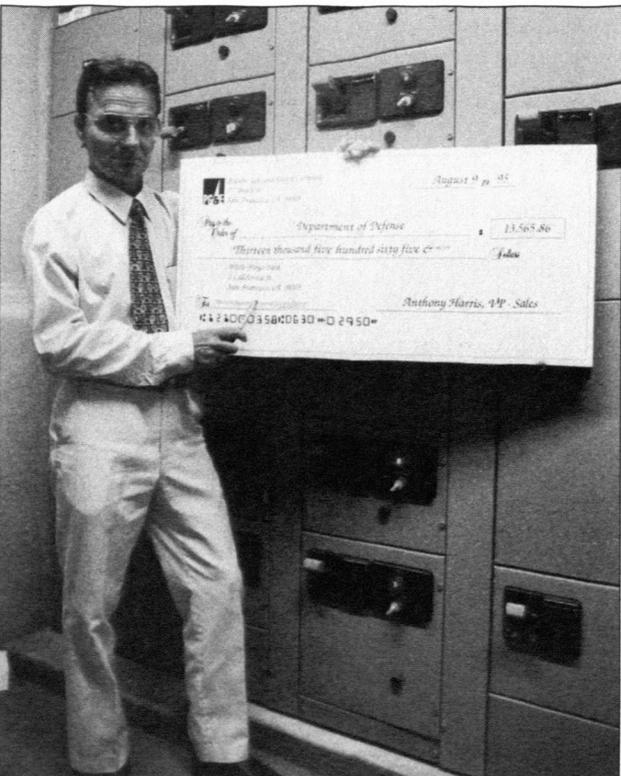
The PG&E representative kept the promise of concise, speedy design review. Everything from the initial design review to final field verification of the newly-installed equipment was performed on schedule, with a spirit of cooperation.

As a result, the state-of-the-art 27,000-square-foot facility at Parks RFTA incorporates the most current energy-efficient glazing, motors, lighting and controls. There is nothing exotic in this project, just smart design that provides energy efficiency while giving the greatest comfort.

Because this was a test case, the design and equipment selection were conservative to minimize impact on the construction budget. However, since the calculated payback period for energy-efficient equipment is estimated at only 3.2 years, more efficient (and expensive) equipment may be recommended in future designs. The 10-year rule would allow about three times the test case's investment cost and enable the purchase of equipment with higher efficiencies.

What started as a personal challenge to pursue a quality product led to a successful test case which exceeded state energy efficiency standards by 38 percent. The beneficiaries include the military intelligence community which uses the new, high-tech facility at the Parks RFTA, and the taxpayers.

In addition to the \$13,363.86 rebate check, the customer is saving more than \$1,000 per month in reduced utility expenses, and will continue to save for the life of the building.



Ray Zimny holds the "big" check that Sacramento District received for energy savings.

# Around the Corps

## General officer news

Maj. Gen. Milton Hunter, commander of North Atlantic Division, was promoted from brigadier general on May 1.

Brig. Gen. Anthony R. Kropp, Director of Mission Support and Assistant Chief of Engineers for Reserve Affairs, has been nominated for promotion to major general.

## Environmental training tool

A new tool for assessing environmental training requirements, the Environmental Compliance Awareness Training Survey (ECATS), has been introduced by the Environmental Training Support Center, Huntsville, and the Army Environmental Center.

"ECATS is a user-friendly computerized survey program that will give commanders and supervisors a means to determine the environmental training needs of their personnel," said Rick Montgomery, an environmental protection specialist at Huntsville Center who helped develop ECATS.

ECATS poses a series of questions concerning the tasks an individual performs on the job, and questions about the work environment. After participants respond to the questions, the computer program generates a list of the training they need under the Codes of Federal Regulations.

The program gives supervisors a print-out showing the training required, where to obtain the training and who to call for assistance.

ECATS will be fielded in three phases. The first phase will establish Category I requirements (training required by federal law). Phase I ECATS computer disks and instructions were distributed April 1 to Army installations and activities for evaluation.

Later ECATS phases will establish Category II (training to enhance environmental compliance), and Category III (desired training to benefit the installation or activity).

## Computers to schools

It started with the turn-in of an IBM XT that had been in Los Angeles District's public affairs office for years.

"Having worked in Jacksonville District's Adopt-A-School program, I knew there had to be a mechanism to donate excess computer equipment to schools," said Dr. Fred-Otto Egeler, chief of public affairs. "I submitted a suggestion under the Army Ideas for Excellence Program that our excess and outdated computers be donated to Garfield High School."

Retired Lt. Col. Ronald M. McLeod, senior Army instructor at Garfield High's Junior Reserve Officer Training Corps, picked up 48 computers and 14 printers. When McLeod got back to the school, he learned that all the computers in the main office had been vandalized the night before. Several of the ones he had picked up for his students went to work immediately to get the school back on line.

More than 200 pieces of computer equipment have been donated to other schools by Los Angeles District.

## Vendor conference

About 180 vendors of supplies and services from across the U.S. gathered in Vicksburg on March 12 to learn a new way of doing business with the federal government by transitioning their organizations into the Electronic Data Interchange (EDI).

EDI is considered a critical part of electronic commerce and the government's contracting program because it enables computers to exchange data electronically much faster, more cheaply and more accurately than possible using the present paper-based system.

Vicksburg District, the Lower Mississippi Valley Division and the Waterways Experiment Station sponsored the conference, along with the Hinds Community College Small Business Development Center, the Central Mississippi Procure-

ment Center and the Orange, Texas, Electronic Commerce Resource Center.

## Hydrographic surveying workshop

Dredging operations are a large part of the Corps' mission, and accurate volume calculations are essential for contract payments. The Topographic Engineering Center (TEC) and Coastal Oceanographics, Inc., recently sponsored an Advanced Hydrographic Surveying Workshop to demonstrate advances in hydrographic surveying.

The workshop was held on the Mobile River at Mobile, Ala., March 18 through 22. It was free and open to federal, state, and local agencies, industry and academia. About 350 people attended from 42 states and 14 countries.

The workshop featured a multibeam sonar surveying course, a presentation of accomplishments from a Cooperative Research and Development Agreement, and instruction on the latest version of HYPACK, the hydrographic surveying software by Coastal Oceanographics.

Eight survey boats gave demonstrations of the latest positioning and surveying technology. In addition, 32 exhibitors of differential global positioning systems, multibeam data acquisition and processing software, motion sensors, and the latest survey equipment, software and services were on hand.

## Judge selected

Steven L. Reed, an administrative judge with the Corps' Board of Contract Appeals and a lieutenant colonel in the Army Reserves, has been selected as a military judge with the 10th Legal Support Organization. He will serve a three-year term which started May 1.

## Correction

Diane Parks works for Portland District, not Seattle District as reported in "Corps battles Pacific Northwest flood" in the March *Engineer Update*.

# Alaska District marks 50 years of service

By John Killoran  
Alaska District

Alaska District celebrates its 50th year of service to the nation this year. During those 50 years, the district has served as the principal engineering design and construction management agency for the Army and Air Force and built most major facilities, buildings and runways used by the services in Alaska.

The district also built more than three dozen navigation projects and small boat harbors throughout the state. It manages all real estate transactions for the Department of Defense in the 49th state, and administers provisions of the Clean Water Act of 1972. The estimated value of Alaska District's 50 years of construction is more than \$15 billion in current dollars.

The district staff consists of civilian engineering, biological and technical service specialists directed by Army engineer officers. About 450 of the Corps' 40,000 employees are in Alaska.

The 50th anniversary was celebrated on April 25 in a ceremony at Elmendorf Air Force Base where the district is headquartered. In a special message to district employees, Sen. Ted Stevens



Col. Benjamin Talley (right) receives the Distinguished Service Medal in early 1943 from Lt. Gen. Simon B. Buckner, commander of Alaska Command. (Photo courtesy of Alaska District)

(R-AK) said, "As an eyewitness to many of your accomplishments, I say thank you for a job well done. We appreciate you, the work you do and the dedicated professionalism with which you face the future. Your challenges, and accomplishments, are second to none."

Several dozen retirees joined more than 350 current employees and guests for the occasion. Retired Brig. Gen. Benjamin B. Talley was on hand for special honors. Talley, 93, was honored for his leadership of the 1940-43 military build-up in the state. As commander of the Corps area office, Talley ramrodded the construction program in record time. For example, Corps employees built the air base at Elmendorf in one year; experts said it would take two. Later in the war, Talley commanded the beachhead at Omaha Beach during D-Day.

Talley was cited by the Society of American Military Engineers (SAME) for his long service, and named as a Fellow, SAME's highest membership. The award was presented by Col. Peter Topp, Alaska District Commander.

The celebration featured slides showing the Corps' accomplishments in Alaska. Besides building defenses during World War II, the engineers built several networks of early warning radar sites and missile bases during the Cold War. The district performed rescue work and helped rebuild south central Alaska after a devastating earthquake in 1964. In 1989 district employees helped clean up the Prince William Sound oil spill.

# Bicyclist keeps 'trailblazing' alive

Article and Photo  
By Stu Erickson  
Omaha District

Many of us enjoy reading about the trailblazers of American history —Daniel Boone and the Wilderness Road, or the Lewis and Clark expedition.

America's "trailblazing" days are mostly gone. Access to trails, with their less-hurried pleasures, might be gone, too, except for people like Gary Gebhard, a local and state leader in focusing attention on the value of hiking and biking trails.

## Grass-roots

A man in biking shorts rather than buckskin, Gebhard is a point-man in the Omaha area's trails movement.

"Trails work is largely a grass-roots effort that has to come from the bottom up to get anything accomplished," said Gebhard, an architect in Omaha District's Special Projects Branch. "There hasn't been a lot of top-down push, and I think communities and states are missing a real opportunity."

Gebhard and other enthusiasts are building private and public support for creating opportunities to enjoy the spirit-lifting, health-building pleasures of walking, running, biking or skating on urban and country trails.

Gebhard's "Trails Resume" is lengthy, but it's enough to note that he co-founded and is president of the Eastern Nebraska Trails Network (ENTN). He has also worked to create almost every trail proposed for metropolitan Omaha.

## Early days

Gebhard's "trailblazing" began when he got a Schwinn coaster bike and paper route as a 12-year old growing up on Lincoln's south side.

"I was kind of a skinny, sickly kid with a lot of colds and other stuff when I was young," Gebhard said. "When I got the bike and paper route, it made a tremendous difference in how I felt."

Later, when 10-speeds came into vogue in the early 1970s, he traded his Schwinn coaster for an English Dawes, then a French Gitane.

"My goal at that time was to bike to Pioneers Park and back," Gebhard said. "That was a round-trip of 10 miles. I really felt I had achieved something when I did."

He since has gone farther in the *Des Moines Register's* Annual Great Bike Ride Across Iowa (about 500 miles), and as a five-time participant in the Bike Ride Across Nebraska sponsored by the Northwest Omaha Rotary Club. He does this on a 12-speed Raleigh Professional, an "old shoe" of a bike he's had for 21 years.

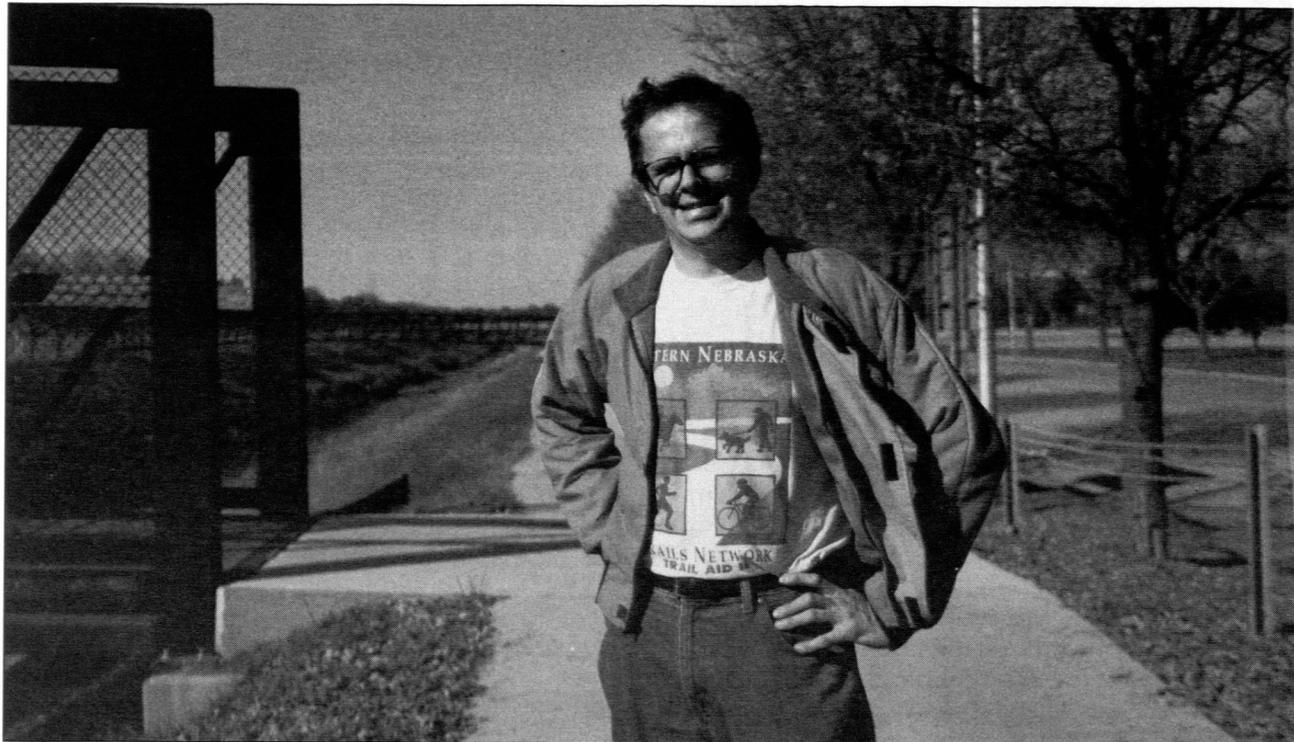
When Gebhard was an undergraduate at the University of Nebraska of Lincoln he usually commuted by bike. He also learned a lot about working on them and put this knowledge to use in two bicycle shops as a \$5-an-hour repairman.

"That was pretty good money for part-time work in the '70s, well over minimum wage," Gebhard said. It went a long way toward paying for a bachelor's degree in architecture.

When it comes to nurturing the growth of the trail system in the metropolitan area and state, Gebhard points out that any number of others have done more. Nevertheless, he is a high-profile stakeholder in the movement.

## Necessity and cooperation

"A principal reason I got involved was that when I first moved to Omaha 14 years ago, there wasn't really any place to ride," he said. "The



Gary Gebhard of Omaha District is building support to preserve the nation's hiking and biking trails.

hills and street system don't lend themselves to the sport in the city. Lincoln's trail system is much further along toward its goal of building 100 miles of community recreational trails."

Although the trails movement begins at the grass-roots, Gebhard says that a union of corporate, private and government entities is necessary to complete the job. One mile of concrete trail can cost as much as \$125,000. Most rural trails are less costly, but all require cooperation and financial output by the community and others.

As touring director for the Omaha Pedalers Club in the mid-80s, Gebhard promoted the interest of the city and the Papio-Missouri River Natural Resources District (NRD) in developing the popular Keystone Trail along Little Papillion Creek. Omaha's first multiple-use trail, it is widely used by walkers, joggers, bicyclists and inline skaters. NRD people have typically been in the forefront of trails development in Nebraska, said Gebhard.

If all goes well, an 80-mile system of trails will be completed in the Omaha metro area by 2000. The city, NRD and county are collaborating to build and fund the work. Funding is also coming from the Nebraska Department of Roads through the federal Intermodal Surface Transportation Efficiency Act which has designated set-aside highway money for alternative transportation.

## Lobbying

The reach of Gebhard and his ENTN colleagues is not just provincial. "The ENTN had just organized when we got involved in a successful lobbying effort in 1992 in support of LB 739 (in the Nebraska Legislature)," Gebhard said. Passage allowed the State Game and Parks Commission to acquire the abandoned Chicago & Northwestern Railroad rail bed for a hiker-biker trail stretching 250 miles from Norfolk to Merriman along the Niobrara River Valley and through the northern Nebraska Sandhills.

This year, ENTN was behind the effort to get LB 296 passed which establishes a statewide trail coordinator, permits the collection of user fees and allows Nebraska to continue to get \$180,000 per year through the Intermodal Surface Transportation Act, which authorizes federal funds to be matched for local funds for trail development.

Not all their efforts have been as successful. With Omaha and Lincoln the state population centers and the largest concentration of potential trail users, a trail between the two would seem natural. But efforts to acquire the right-of-way of the abandoned Chicago Rock Island and Pacific rail bed were thwarted by local landowners and lack of political push.

"We decided that the next time we would be quieter in our approach," said Gebhard. "We allowed opposition interests to get organized. We have found, however, that once a trail is completed, the fears of neighboring landowners are rarely borne out." He notes that only 15 percent of the land acquired for agriculture on this right-of-way is being used for farming.

In spite of the setback, Gebhard says a "Two Cities Trail" is still possible. "Acquiring the right-of-way over the Rock Island bridge is a quantum leap towards the eventual development of this trail," Gebhard said.

## American Discovery Trail

As ENTN president, he was consulted on the proposed American Discovery Trail (ADT) planned to span the nation from San Francisco to the Delaware shore. The ADT has attracted enormous interest among trail proponents. The hope is that Congress and the President will eventually designate the ADT a national scenic trail to be managed by either the National Park Service or U.S. Forest Service.

"In Nebraska, the ADT would generally follow the Platte River Valley to North Platte, then proceed along the South Platte to Denver," said Gebhard. "It would incorporate the 'Two Cities Trail.'"

A critical element is development of a pedestrian passageway across the Missouri River. In May, 1995 Gebhard and others met in Omaha with ADT Coordinator Reese Lukei Jr. to discuss possibilities. Gebhard believes that the increasing success of the trails movement demonstrates growing public interest in building recreational trails.

"Our job is to get people and governments to realize the opportunities that are there," said Gebhard. "It's kind of the 'little pile' theory. We create little piles of interest that, when combined, result in a viable trail."