



## Utilities privatization takes off

### Fort Hamilton first to place all utilities under one contract

By Ivan Damaso  
New York District

New York District awarded a contract for utilities privatization at Fort Hamilton, N.Y., on Dec. 2, making Fort Hamilton the first Army installation in the nation to privatize all its utilities under a single contract.

The contract, valued at \$25 million, was awarded to Enron Federal Solutions, Inc., an energy corporation based in Houston. According to Bill Tully, project manager, the scope of work for the contract "encompasses the transfer of ownership of all utilities at the military installation (electric, gas, water, sewer, and storm water) to the contractor, and requires Enron to operate, rehabilitate, and maintain the utility systems for 10 years."

The utility privatization project divests the installation of a non-core service and relies on civilian expertise to provide these essential services. The contract award validates a concept advanced by the Military District of Washington (MDW) for including all utilities at an installation in a single package. This method is expected to streamline coordination with the contractor, ensure inclusion of all utilities, and achieve economy of scale.

#### Defense Reform Initiative

Authority for the award comes from Defense Reform Initiative Directive (DRID) #49, which directs the military to develop plans for privatizing electric, water, wastewater, and natural gas utility systems. Ali Darvishian of MDW said, "The objective of DRID is to get the Department of Defense out of the business of owning, managing, and operating utility systems." The directive exempts utility systems from privatization when unique security reasons require that the U.S. own the system. Utility systems are also exempted when privatization may be considered uneconomical.

#### The process

Through a contract administered by Baltimore District and the U.S. Center for Public Works, an architect-engineer performed the cost-of-service and life-cycle cost analysis of Fort Hamilton's natural gas distribution, electric distribution, potable water distribution, and wastewater collection systems.

"Under Army regulations, if the overall privatized life-cycle cost-of-service is less than or equal to the life-cycle cost of continued Army ownership, privatization of the utility systems can be economically justified," says Ed Rutherford, project manager from Baltimore District.

A four-step process determined whether privatization of Fort Hamilton's utilities met the requirements of regulations. The first step developed an inventory identifying the facilities owned by the installation, and the fair value of these facilities. The second step developed the baseline cost-of-service and 25-year life-cycle cost analysis of continued Army ownership of each utility system. The third step was the request for proposal (RFP) phase. New York Dis-



Fort Hamilton, N.Y., is the first Army base to place all of its utilities under one contract. New York District handled the contract. (Photo courtesy of Fort Hamilton)

trict, as the Source Selection Authority, requested qualified companies to submit RFPs indicating the price they would pay for the utility systems, and the costs they would need to recover to collect the operating conditions identified. The final step was to analyze the RFP responses, determine the best value, and transfer the property.

"The criteria for selecting the contractor was based on the best value to the government, with experience and demonstrated performance included as significant evaluation factors," said Larry Locke, a contract specialist for New York District. Potential contractors were obligated to ensure adequate and dependable utility services to all facilities and equipment serviced. The services were to meet all applicable national standards, and state and federal safety, fire, and environmental laws and codes.

#### Cost savings

Maintaining and replacing existing utility systems is becoming more complex and costly, making it difficult for the government to operate them in compliance with federal, state, and local laws and regulations. Through privatization, the Department of Defense could anticipate modest Operations and Management (O&M) savings and possible large-scale capital cost avoidance. In particular, Fort Hamilton is expected to gain a potential savings of \$600,000 during its 10-year life-cycle Operations and Management cost, besides the capital improvements that will be made to the utility systems.

#### Contractor commitment

Enron, one of the largest independent power plant owners/operators in the world, brings the ability to manage large, complex infrastructure projects. The company provides risk management services, operational efficiencies, and an ability to raise sufficient capital to allow successful project execution.

Enron anticipates immediate replacement of the existing water and natural gas systems at Fort Hamilton because of their age. Significant upgrades to the electrical distribution system are also expected. Specifically, the company proposes to replace poles at the substation, upgrade wires to stranded aluminum with a steel center, and replace seven pole-mounted transformers with pad-mounted transformers. Separating the wastewater discharge from the storm water discharge is also planned.

Enron expects to complete the recommended projects in the first year of the contract. The result will be state-of-the-art utility distribution/collection systems that will operate efficiently beyond the 10-year contract. Optimal system performance will then be maintained by a complete systems O&M plan.

"We view the contract as a long-term opportunity, not just 10 years, and support the language contained in the Department of Defense fiscal year 2000 appropriations bill," said Kenneth Lay, Enron's Chief Executive Officer. "We'll demonstrate in our technical and management approaches how Enron can bring new technology and 21st century utility systems to Fort Hamilton."

## Insights

# Welcome to the new millennium!

By Lt. Col. Tim Carlson  
Chaplain, U.S. Army Corps of Engineers

We all waited.

The ominous predictions about the Y2K computer glitch left us with an entire array of responses. Perhaps your family now has an additional thousand dollars worth of food stockpiled in your basement. Maybe you're now carrying more cash than ever before. Or perhaps you put some cash in a safe place in your home, just to tide you over if the banks failed.

Well, we made it! Midnight Dec. 31, 1999, passed and civilization did not crumble around us. (*Editor's note: That's assuming you actually are reading this and not crouched in some dark pile of rubble in a ruined city!*) We are now an elite group of persons whose lives have spanned not only two centuries, but also two *millennia!*

I feel a little like the main character in the story of *Le Petit Prince* (*The Little Prince*) that I read to my children when they were small. There he was, almost like John Glenn for the first time in orbit, or Neil Armstrong when he looked across the moon for the first time. He rubbed his eyes, looked over the vast domain of a strange, new world, and the story begins.

Many, many things were anticipated as 2000 approached. Some happened, some were impossible, and still others occurred that no one could have guessed. Regardless of what the near-term or long-term future holds, one thing is certain — none of us will be here for Y3K.

One could easily diminish the significance of this new thousand-year period. ("It's just another day, Joe. I came to work today just like last Friday. Same cubicle, same problems on my desk, same coffee in the pot.")

But I find it a good time for intentional reflection and future planning. As I reflect on my fairly short time on Earth, it is easy for me to visualize myself as the little prince. I stand just beyond the threshold of this 21<sup>st</sup> century, and can scarcely grasp the meteoric changes that have occurred since my childhood in southeastern Kentucky. Those days of climbing moderately steep hills, resting on benches of the little mountains, and throwing long, straight stems of enormous weeds down into ravines and valleys seem so

far away and so different from the world of today.

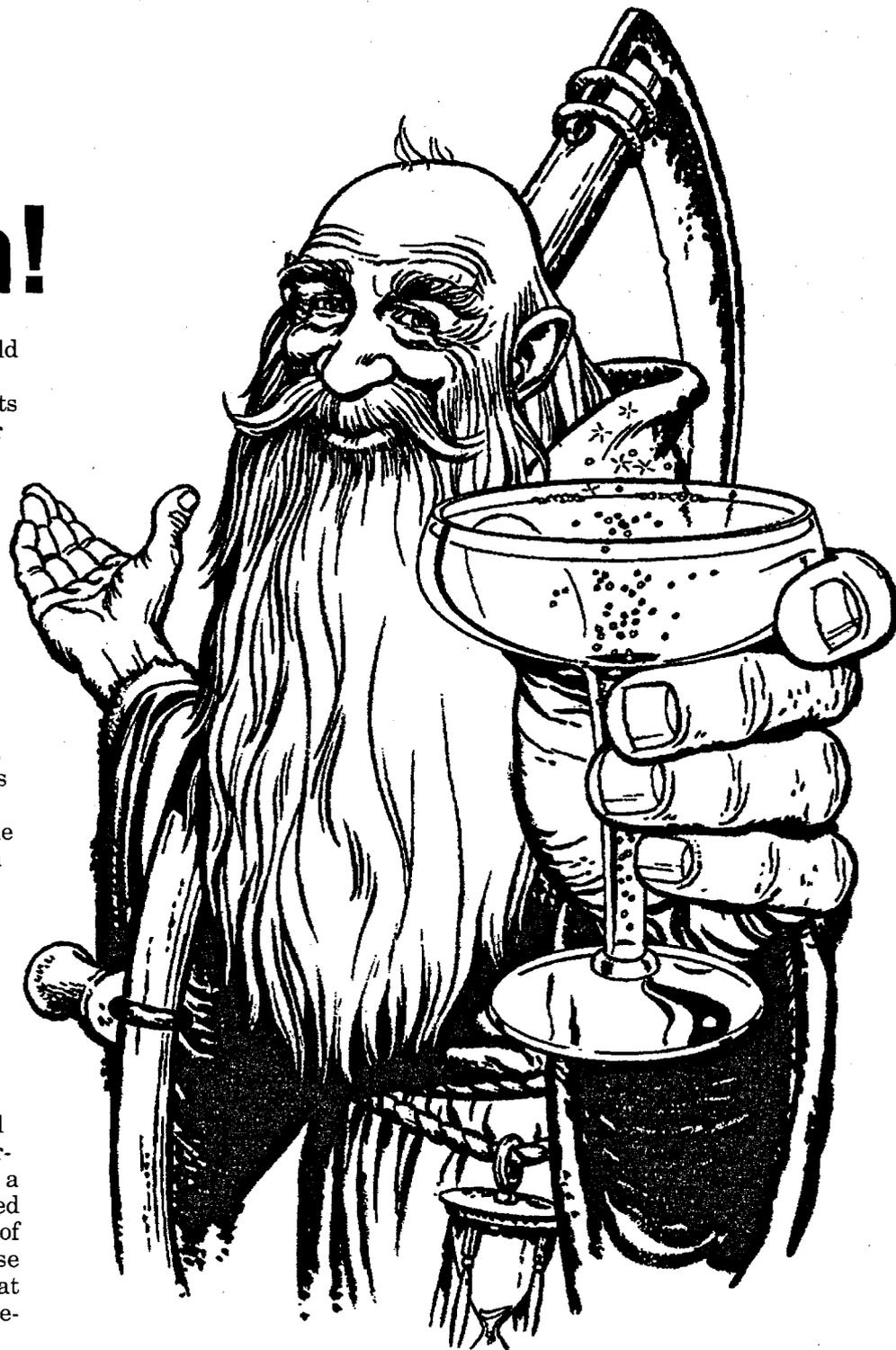
Coming to significant passage points in life is part of our sojourn on our planet. We can't escape looking backwards, but neither can we prevent the overwhelming urge to *move on*. This is where the reality of a new millennium begins to impact my thoughts. The Dark Ages were still upon the Earth at the beginning of Y1K. Only an elite few could read. Electricity, the printing press, laws of gravity, knowledge of a round earth, and steam power were unknown then. What a giant leap our world has taken since that time!

Can you imagine what someone might write a thousand years from now about us? That thought makes the Army After Next and even 20-year future plans for our Corps already seem like ancient history.

As part of my journey within the past century, I spent one intense year at Walter Reed Army Medical Center here in our nation's capitol. My training was in bedside pastoral counseling, called Clinical Pastoral Education in chaplain parlance. It's a tough job. I always got a deep, in-the-gut pain when they called a "Code Blue" or a "Code 66" on one of the wards where I worked. These emergency notifications indicated that a patient was dying and needed immediate care.

Ward 49, the Medical Intensive Ward, was part of my coverage area during one of those months. One day, not far into my watch, the call came and I hurried to the bedside of a lovely, 67-year-old lady. She had just been resuscitated and was regaining some normalcy to her breathing. I paused for a moment. The relief of finding her still alive was almost beyond words. I engaged her in appropriate, brief conversation. Then I posed a question that was important to me: "Were you afraid of dying?" I needed to know because, truthfully, I was afraid of death at that time. Her answer surprised me then and, now, from my vantage point of greater faith, it delights me as well. "Oh no," she replied. "Death will be, for me, the most exquisite experience of my entire life."

I had prepared myself for a short, grueling time of comforting her as she neared her ultimate passage point; a



passage that will come to us all just as surely as the new millennium has come. Instead, *she* comforted *me*. In those brief moments as we continued to chat, she confirmed hope stemming from her deep faith in her God.

What will the next century bring? In my old age, will my sons think I'm hopelessly out-of-date because I don't have implanted memory chips? Will they pity me because my unmodified genes won't let me live more than a century? Or will they envy me because I lived in a simpler time with better values?

I can't say, any more than I could have predicted today's advances when I was a child in Kentucky. Back then, they were predicting we might live in undersea colonies, or drive bubbletop electric cars, or be trying to survive in the ruins of a nuclear war.

But as we all sally forth into 2000,

I'm reminded of a wall plaque in the home of a dear family in Appalachia. It said, "Only one life, will soon be past, only what's done for God will last." In my belief system, that gives me both great motivation for moving into this "brave, new world," and great security in doing so.

Consider how far our world has come since we were children. We now have remarkable opportunities to impact our world in ways that transcend our imaginations. Let us boldly step into this future. The adventure in the journey compels us onward!

### Essayons!

(*The views expressed in this article are those of the author and do not reflect the official policy or position of the U.S. Army Corps of Engineers, the Department of the Army, the Department of Defense, or the U.S. Government.*)

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# L.A. school district asks Corps' help

The U.S. Army Corps of Engineers' support to the nation's schools continues to grow.

Howard Miller, Chief Operating Officer of the Los Angeles Unified School District (LAUSD), signed a memorandum of agreement (MOA) with the Corps on Dec. 6. Los Angeles District will assist LAUSD with building new schools, and with the communications/internet upgrading of about 900 schools. District Engineer Col. John Carroll signed the MOA for the Corps.

This is the second school district to request the Corps' help. In April 1998 the District of Columbia Public School System signed a MOA with Baltimore District to execute a multi-million dollar improvement program. The MOA called for repairing the schools so they could open on time. Repairs included roof replacement, installing heating and cooling systems, repairing windows, and removing heating oil storage tanks.

The agreement between LAUSD, the nation's second-largest school district, and the Corps provides for project management services to the school district as needed for the next five years. The Corps will not actually build schools, but will supervise construction, select contractors, review designs and plans for new campuses, and assist in the search for new school sites. The Corps' engineers and construction experts will report to the school district's senior administrators and ensure state laws are followed. The school district will retain ultimate control of the program.

At a news conference announcing



Protective guards are installed on the windows of Belvedere Middle School. (Photo courtesy of Los Angeles Unified School District)

the agreement, Miller said the Corps would provide personnel to oversee the selection of new school sites, environmental clearance of the land, and design and construction of buildings.

"I don't think the district will ever have the competence or capability to build hundreds of millions of dollars in new schools," said Miller, who negotiated the agreement for the school district. "We will always need to rely on outside agencies.

"No additional layer of federal over-

sight will be added to the construction program, and the district's pledge to run all new school sites past the state Department of Toxic Substances Control for approval will be adhered to," Miller added.

The Corps will be reimbursed for the salaries of its employees who take part in the program.

Miller will present a budget for the Corps' participation to the school board in the middle of this month. "This was not my original idea, but that of Rep-

resentative Howard L. Berman, (D-Mission Hills), who suggested it to me, and I contacted the Corps a week ago with the idea that they (the Corps) could be of assistance."

Los Angeles District will use project delivery teams that will, together with LAUSD, pick locations for new schools, recommend developers, negotiate contracts, and manage projects. Building 150 primary centers will be a district priority, according to Miller. "These small schools house students in kindergarten through the third grade and require less space and land than traditional elementary campuses," he said. "In addition to overseeing that construction, the Corps is expected to manage the proposed reconfiguration of some elementary schools that will become middle schools, and some middle school campuses that will be converted to high schools to accommodate a rapidly increasing student enrollment."

The school district, which already has 711,000 students in 660 schools, is facing a June deadline to choose new campus locations so it can apply for \$850 million in state funds.

"I think the Corps of Engineers brings substantial increased credibility that we need to the district's building activities," Miller said. "It is an unimpeachable partner that is external and has a highly distinguished reputation."

(Dr. Fred-Otto Egeler, Public Affairs Officer of Los Angeles District, and Doug Smith of the Copley News Service contributed to this article.)

## Commentary

# Happiness is warm goodbye to a pal

By Col. Robert "Doc" Mirelson  
Headquarters

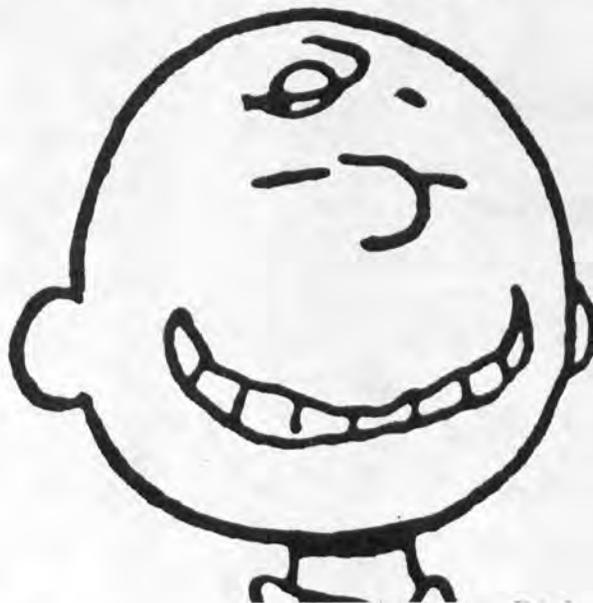
I recently lost a good friend. What made it even harder, I knew him most of my 50 years. Although I was a few months older, he always seemed to have the wisdom and insight beyond our years.

He could usually make me laugh, make me stop and think or, even more important, make me realize how much I had to be thankful for in my life. He was really a great guy.

I guess we were friends because we shared so much and had so much in common. We both loved baseball, and shared the dream of growing up to play in the majors. But long after I realized I would never play first base for the Yankees, he nurtured a hope and enthusiasm for the game which helped renew my spirits every spring. Because of him, I never lost my dreams about baseball...the golden summer game of our youth.

We both loved and had our hearts broken, like so many adolescents. Unlike him, I met, courted, and eventually married the woman who is the one true love of my life. My friend never did have success with the one woman he knew was for him. I never could understand why she couldn't see the good in him. He always said love was funny, but he often found sadness instead.

He was great with animals, and I always remem-



Charles M. Schultz  
United Features Syndicate, Inc.

ber him having a great dog. Maybe that rapport and companionship made up for his bad luck with love. He never believed in being his dog's master. They were companions and friends...probably best friends.

He never joined the military, but during those turbulent times when I went off to the Army, he was

supportive. But, then again, we came from a supportive generation. Our dads were working-class men who had helped defend democracy. They were our biggest heroes when we were boys, and we learned to honor them and their predecessors. I guess we grew up in different times, but he never forgot a kind word or card on Memorial Day or Veteran's Day. He really was a throwback to another era; maybe that's why I liked him so much.

He was a good friend, a good big brother to his kid sister, and great kid to have around the neighborhood. We always shared the holidays, and I can still relate to his tales about summer camp. Even when we became adults, and drifted apart due to careers, family, time, and distance, I always kept track of him. He never disappointed me.

It is hard to believe he's truly gone. I wish I was asked to say a few words about him at his passing, but so many more articulate than I were chosen. I guess that's only right for someone gained such celebrity from such a humble beginning.

I can't add much to the many accolades I've read about him and his short but wonderful life except...

"You really were a good man, Charlie Brown."

(The views expressed in this article are those of the author and do not reflect the official policy or position of the U.S. Army Corps of Engineers, the Department of the Army, the Department of Defense, or the U.S. Government.)

# Military programs strong in new century

By Scott Saunders  
Headquarters

Soldiers, airmen, and their families can expect improvements in the quality of their lives as the new century unfolds, thanks to the military programs team, and to a relatively healthy military construction program.

"I'm very proud of our organization and its efforts to improve living conditions for our hard-working soldiers and their families," said Maj. Gen. Milton Hunter, Deputy Commanding General for Military Programs. "Today, more than ever, quality of life enhancements are critical to Army readiness and retention. It's a tribute to our military programs team, throughout the organization, that together we are making many of these things happen."

Barracks projects, as they have in recent years, continue to dominate the military construction (MILCON) program for fiscal year 2000 (FY00), accounting for 30 percent of the total program. The Army plans to modernize all permanent party barracks by 2008, so barracks will be a top Military Programs priority for a number of years.

## Privatization

The Army Family Housing (AFH) program accounts for another nine percent of the military construction total. Today, a housing privatization program complements AFH. Under the privatization program, contractors build and/or operate family housing for an installation. The ultimate goal of the privatization program is to do away with the \$6 billion construction and maintenance backlog for Army housing, thereby improving the quality of life for Army families.

On Dec. 3, at Fort Carson, Colo., final AFH privatization contract documents were signed and a notice to proceed issued to the contractor, Fort Carson Family Housing Limited Liability Corp.

The contractor assumed responsibility for managing, maintaining, and renovating the 1,823 existing housing units, as well as building 840 new family housing units. Government control of the contract has transferred from Omaha District to the Fort Carson contracting office.

The Fort Carson initiative marks the Army's first successful installation-wide privatization of family



Continuing work in Kosovo is part of the Corps' military construction program. (Photo by Dana Finney)

housing. It represents a major step forward in improving readiness and quality of life as the Corps does its part to support the Army commitment to taking care of soldiers and their families.

Next in line for AFH privatization is Fort Hood, Tex., followed by Fort Lewis, Wash., and Fort Meade, Md.

## Medical care

Superior medical care is another Quality of Life (QOL) issue, and the FY00 medical MILCON program is strong. Projects either underway or on the books range from small medical warehouses to dental clinics, troop medical clinics, ambulatory health care centers, a major hospital renovation, and a major hospital replacement project. These QOL improvements will benefit active duty soldiers, military de-

pendents, and retirees.

The total FY00 medical MILCON program includes 11 projects with a total budget of \$215 million — a hefty increase from the \$91 million total in FY99. The five-year outlook appears strong as well.

## Other programs

Other aspects of the MILCON program have also increased. The chemical demilitarization program in FY00 more than doubles the FY99 total, up from \$75 million to \$174 million. The Air Force program has increased from \$444 million in FY99 to \$663 million in FY00. The Air Force Reserve program leapfrogged to \$57 million from \$22 million last year.

Military Programs anticipates a total of \$247 million for the Barracks Modernization Program (BMP). Funded separately from MILCON with OMA and Quality of Life funds, the BMP was decentralized and managed by individual Army commands in FY99. This year, the Army has again asked the Corps to manage this account.

The Military Programs FY00 execution will also include projects authorized and funded by the Kosovo Supplemental Bill passed by Congress last May. The Pentagon has not yet determined which projects will be accomplished under this bill. Europe District will execute this work.

For the longer-term, the Army has proposed a new facility management strategy to improve the "look and feel" of Army installations. The intent is to stop deterioration of installation facilities, and to modernize certain critical facilities while addressing their deficient numbers.

While late non-specific funding reductions directed by Congress and DoD increase the Military Programs challenge of executing the FY00 programs within available funds, the outlook still looks promising for the new year.

## Last year

Last year was successful as well. Military Programs awarded 99.4 percent of the total available Army MILCON dollars — the best execution percentage of the last 10 years. The Air Force MILCON program was not far behind, awarding an exceptional 98 percent of the total combined Air Force programs.



Barracks construction, like this room at Fort Gordon, Ga., is an important part of the Corps' contribution to soldiers' quality of life. (Photo by Jonas Jordan)



## Focus on Great Lakes & Ohio River Division

Buffalo, Chicago, Detroit, Huntington, Louisville, Nashville, Pittsburgh

# Division has big territory, missions

By Cathy Schuchter  
Great Lakes & Ohio River Division

Great Lakes and Ohio River Division (LRD, for Lakes and Rivers Division) is *big*. It covers the Great Lakes watershed including the U.S. portion of the St. Lawrence River, the Chicago River watershed, and the Ohio River watershed from its headwaters to the Mississippi River. This is 355,300 square miles, parts of 17 states, and 56 million people.

The division, created in 1997 by combining the former Ohio River Division and three districts from the former North Central Division, operates from two regional offices — the Great Lakes Regional Office in Chicago, and the Ohio River Regional Office in Cincinnati.

The division and its seven districts serve a wide range of customers, so satisfying the customer is their highest priority. By using the combined regional offices' expertise and technology, the division can provide its customers seamless access to all the resources available throughout the Corps.

The division also has a rich and diverse workload. From its first mission of clearing snags from the Ohio River in 1824 to its latest mission of cleaning up contaminated military sites, the division produces products and services that fully meet customers' expectation of quality, timeliness, and cost-effectiveness.

Sixty percent of the division's workload is performed in civil works, 26 percent in military programs, five percent for its support for others (SFO) program, five percent for its environmental program, and four percent for the Formerly Utilized Sites Remedial Action Program (FUSRAP).

### Military programs

The division continues to serve the Army and other military customers. LRD provides engineering and

real estate services to 20 DoD installations in Illinois, Indiana, Kentucky, Michigan, and Ohio. The division builds training ranges and other mission facilities, barracks, family housing, schools, and other needed facilities. LRD does this for their main customer — the soldier and his or her family. LRD also supports the Air Force with dormitories, laboratories, headquarters buildings, and community buildings.

LRD now has a large and growing Installation Support Program, including its Environmental Design Center in Louisville District.

Whether it's a natural disaster or a call to action, LRD is ready to support DoD during mobilization. Recent support includes Operation Joint Guard and Desert Vigilance.

### Civil works

LRD's civil works mission covers seven districts, with a workforce of almost 6,000 employees and a budget of \$708 million.

**Navigation** — The Ohio River and its seven navigable tributaries have more than 2,500 miles of waterways, and carry 35 percent of the nation's waterborne commerce. For years, LRD has worked to speed navigation traffic through the Ohio River System. Work is progressing on some significant lock and dam projects — dam rehabilitation at the Robert C. Byrd project, and new twin 1,200-foot locks and dam at Olmsted, Ill., both on the Ohio River. LRD is also working on a lock addition at Kentucky Lock on the Tennessee River; a new navigation dam on the Monongahela River; and a lock addition at Marmet Locks and Dam on the Kanawha River.

On the Great Lakes, total annual commerce averages 175 million tons. The St. Lawrence Seaway is a dynamic, international waterway linking the Atlantic to the Great Lakes. This deep-draft navigational route is an essential link between the heart-

land and overseas trade centers. At Soo Locks at Saulte Ste. Marie, Mich., a new lock has been proposed, a priority with the shipping industry.

**Flood control** — Today, the division's flood reduction program has a number of assets to protect citizens and their property. The backbone of the flood control system is the 81 multi-purpose reservoirs that control almost one-third of the runoff in the basin. The runoff is monitored by more than 1,000 gauges.

In the Great Lakes region, levee and floodwall work along the Little Calumet River in Indiana will protect almost 10,000 homes and businesses. Also, the Mount Morris Dam on the Genesee River protects Rochester, N.Y., from flooding. It is the largest gravity dam east of the Mississippi River, and has prevented nearly \$1 billion in flood and erosion damages during the past 46 years.

Floodwalls, levees, and channel modifications help protect the heartland. There are 95 of these projects throughout the basins, and more are under construction.

America has invested \$3.6 billion in the Great Lakes and Ohio River Basins' 81 flood control reservoirs and 95 local flood protection projects. These projects, in return, have provided nearly \$15 billion in cumulative flood damage prevention. That is \$4 of savings for every dollar invested.

**Recreation** — While their purpose is to control floods, reservoirs are better known for recreation. LRD has 1,900 field personnel who serve nearly 100 million people each year who visit the 128 lakes and navigation pools.

**Shoreline protection** — Whether it's storm damage problems, erosion, drift problems, or beach replenishment, the division works to improve the Great Lakes shoreline. For instance, 55 segmented offshore breakwaters protect the Presque Isle Peninsula in

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The missions of Great Lakes and Ohio River Division range from personal to big-ticket. Left, ranger Stephen Beason baits a hook so that nine-year-old Victoria can try her luck at Center Hill Lake. Right, segmented headland breakwaters protect a man-made beach at Maumee Bay State Park. (Left photo by George Green of Nashville District, right photo courtesy of Buffalo District)

## Focus on Great Lakes & Ohio River Division

# District tackles many missions

By Nancy Sticht  
Buffalo District

When Capt. Theodore Maurice was assigned to Western New York in 1824 to supervise engineering operations on Lake Erie and to survey the harbors of Cleveland, Erie and Buffalo, it marked the beginnings of Buffalo District. The first permanent District Engineer Office opened in Buffalo, N.Y. in 1857.

The district covers 38,000 square miles between Toledo, Ohio, and Massena, N.Y., covering the U.S. drainage basins for the lower Great Lakes and the St. Lawrence River. About 300 employees and volunteers work in headquarters, two area offices, three field offices, Mount Morris Dam, Black Rock Lock, and the William B. Hoyt II Visitor Center.

Civil works missions include navigation, environmental remediation and restoration, beach erosion and shoreline protection, flood damage reduction, and fish and wildlife mitigation.

The district maintains a Hazardous, Toxic and Radiological Waste Design Center; 35 commercial and recreational harbors; 33 miles of breakwaters, jetties, piers and dikes; 100 miles of federal navigation channels; and about 1,700 miles of shoreline along Lake Erie, Lake Ontario, and the St. Lawrence River.

This includes Black Rock Lock, which permits commercial and recreational craft to bypass the rapids and swift water of the upper Niagara River;

and Mount Morris Dam, the largest dam of its type east of the Mississippi River. Built to protect Rochester, N.Y., from devastating floods, Mount Morris Dam has prevented damages nearing the \$1 billion mark.

### International mission

Buffalo District has an international mission, serving the International Joint Commission (IJC) and the State Department. In the 1950s, the American Seaway and Development Corporation hired the Corps to design the St. Lawrence Seaway and manage its construction. The district built two locks and a 10-mile canal.

The district commander is ex-officio U.S. Regulation Representative for the International St. Lawrence Board of Control, which determines the weekly outflow from Lake Ontario. Most recently, Buffalo District led the U.S. portion of the IJC's team that developed a plan to review the criteria in the regulation plan for Lake Ontario.

The district has also played a significant role in the IJC's International Niagara Board of Control, and the district commander is ex-officio U.S. Chairman of the Working Committee.

### Environment

Environmental stewardship encompasses a wide range of projects in Buffalo District's history and is foreseen as a primary mission in future years.



Buffalo District leads the Ashtabula River Partnership dedicated to removing toxic and non-toxic sediments from the Ashtabula River and harbor. (Photo courtesy of Buffalo District)

The district maintains thousands of acres of public land and promotes the wise use and protection of environmental resources to preserve their quantity and quality for future generations.

Our beach replenishment program has preserved valuable recreational areas, particularly Presque Isle, Pa., the Corps' first erosion control project. The innovative design of 55 segmented offshore breakwaters is the second largest in the U.S.

At Maumee Bay State Park in Ohio, segmented headland breakwaters attached to the land protect a manmade beach created with sand made from local ground rock.

The National Partnership for Reinvigorating Government presented the district a Hammer Award for cooperative efforts with state and local agencies to preserve Strawberry Island.

When Congress assigned the Formerly Utilized Sites Remedial Action Program (FUSRAP) to the Corps, Buffalo District led a virtual team to clean up eight sites in New York and Ohio contaminated with radioactive residue. The team including members from Baltimore, Louisville, Nashville, Detroit, Omaha, and Kansas City districts.

In their first year, the team exceeded all 1998 goals, completing this work for \$5 million less than the Department of Energy projected. Last year, the team cleaned up of the Bliss & Laughlin site and the Ashland 2 phase of the Ashland 1, 2 & Seaway Area D sites. The virtual team has been assigned four additional sites in Ohio.

The district leads the Ashtabula River Partnership (ARP) with more than 50 federal, state, and municipal members dedicated to removing toxic and non-toxic sediments from the Ashtabula River and harbor. This \$42 million project, scheduled to begin in 2002, is the first in Corps history to justify dredging based primarily on ecological improvements.

Because of Buffalo District's performance with FUSRAP and ARP, Sen. Daniel Moynihan and Congressman James Walsh sponsored legislation to give the Corps the lead to clean up Onondaga Lake, one of the nation's most polluted. Under the Water Resources Development Act of 1999, the district will lead a 15-year partnership with federal agencies and New York State to plan, design, and build projects to restore, conserve, and manage the lake.

## Division

Continued from page five

Pennsylvania from erosion. Seven miles of shoreline protect Lake Erie harbor and offer three million annual visitors swimming and a wide range of ecological diversity.

**Regulatory** — The Regulatory Permits Program is very active in the Ohio River region. Annually, more than 6,600 permits are issued in Section 10 and Section 404. In the Great Lakes Region, about 5,000 permit applications are processed a year.

**Emergency management** — LRD's emergency management team is ready to serve the nation during any disaster at any time. We fight floods in our own territory, and support other divisions during hurricanes and other natural disasters. Last year, when Hurricane Georges struck, LRD committed 135 personnel for more than 4,000 man-days.

**Hydropower** — Nine Corps hydropower plants on the Cumberland River generate more than 900 megawatts, enough for 160,000 homes.

**Environmental** — The four areas under LRD's environmental program are military, civil works;

FUSRAP, and Superfund. In the military environmental arena we are actively involved in Formerly Used Defense Sites and Installation Restoration Program projects.

On the civil works side, a good example is the Grays Landing lock and dam project. LRD worked with the Pennsylvania Department of Environmental Resources to fill an old strip mine as a site with clean excavated materials. Several years ago, LRD joined the Office of Surface Mining, the Environmental Protection Agency (EPA), and state agencies and environmental groups to restore damaged streams under the Appalachian Clean Stream initiative. LRD is also participating in the Onondaga Lake Management Conference to remedy severe water quality problems at Onondaga Lake near Syracuse, N.Y.

Under FUSRAP, Buffalo District is cleaning up radioactive residuals from processing sites in New York and Ohio. Buffalo District has eight FUSRAP sites, more than any other district in the Corps.

LRD frequently uses its expertise to support other federal agencies. For example, the EPA has used

our services for sewage treatment facilities and hazardous and toxic waste removal under the Superfund Program.

**SFO** — For the National Park Service, LRD has done real estate and restoration work at the Big South Fork National River and Recreation Area in Kentucky and Tennessee. Huntington District is the Army's program director for the Department of Energy's (DoE) Federal Energy Technology Center, which is responsible for DoE's Decontamination and Decommissioning Program. The Fernald Environmental Restoration Management Company is one of the first projects that the Corps and DoE worked on together to evaluate and demonstrate innovative technology for hazardous waste cleanup.

**International Joint Commission (IJC)** — The common border with Canada creates unique responsibilities for LRD in the IJC. The IJC was created by the Boundary Waters Treaty of 1909 between the U.S. and Great Britain to have jurisdiction over the use, obstruction or diversion of boundary waters of the U.S. and Canada.



## Focus on Great Lakes & Ohio River Division

# Pioneer spirit inspires Pittsburgh

By Richard Dowling  
Pittsburgh District

Pittsburgh District, steeped in the traditions of the nation's earliest explorers, considers itself in the forefront of today's innovative engineers and designers.

Covering portions of five states, the district and its waterways were critical to the western expansion in the 18th and 19th centuries. Lewis and Clark began their expedition from the waters of Pittsburgh District, and the first federally-constructed lock and dam in the Ohio River Basin was built in 1885 at Davis Island, just a few miles downriver from district headquarters.

Today, that pioneer spirit is evident in the district's five-year plan to expand expertise in areas ranging from environmental restoration to infrastructure rehabilitation. The plan's centerpiece is a new navigation dam to be built using innovative in-the-wet construction. The district is also embarking on a project to increase automated operation of navigation facilities on its more than 328 miles of the inland waterway system.

In addition, the district's mountainous, flood-prone terrain offers opportunities to develop non-structural alternatives for protecting lives and property from flood damages.

### Geography

The district covers 26,000 square miles in western Pennsylvania, eastern Ohio, southwestern New York, northern West Virginia, and western Maryland. This includes five major drainage basins of the Ohio River — the Allegheny, Kiskiminetas, Youghiogheny, Monongahela, and Beaver rivers. More than a thousand dedicated employees respond to the water resource needs of about 5.5 million residents. More than 52 million tons of freight annually transit its 23 navigation locks and dams, making the Port of Pittsburgh the largest inland port in the nation.

Pittsburgh District also leads in flood control. The first of its 16 multi-purpose reservoirs, Tygart Lake, was completed in 1938, just two years after passage of the Flood Control Act. Along with 42 local flood protection projects, these reservoirs have prevented \$7.9 billion in property losses and saved many lives.

The district's civil works program is highlighted by the \$705-million reconstruction project for three locks and dams on the Lower Monongahela River, including the Corps' first use of "in-the-wet" construction for a navigation dam on the inland waterway system. A 100-year-old, fixed crest dam at Braddock will be replaced with a modern gated structure built atop two football-field-sized concrete segments cast off-site and floated to the dam site, then sunk in place.

The district is seeking a world-class reputation in four key mission areas — navigation, flood damage reduction, ecosystem restoration, and infrastructure rehabilitation.

### Navigation

Pittsburgh has the highest concentration of navigation locks in the Corps, many dating from World War II or before. This navigation expertise has led to district people taking part in exhaustive maintenance studies for the Panama Canal Commission beginning in 1995 and other work for the St. Lawrence Seaway, in cooperation with Corps districts responsible for those areas. Under the "One Door to the Corps" philosophy, Pittsburgh's hydrologists are conducting wake wash effects testing on the Panama Canal's locks, and the district continues to market



Concrete segments the size of a football field weighing 9,500 tons will be floated in place on the Lower Mon River to build Braddock Dam. The segments will be flooded and sunk into place on pre-drilled pilings. (Photo courtesy of Pittsburgh District)

its navigation expertise through Mobile District since the canal reverted to Panamanian control.

Another area of emphasis in the five-year plan is progress in lock operation automation, particularly where commercial traffic has declined but recreation users still depend on the facilities. District studies will determine how remote-control lock operations can be done efficiently and safely.

### Flood damage reduction

Seeking new ways to reduce flood damages and save lives has special significance in the district's mountainous regions. Where communities or topography won't support large reservoir projects, district planners have designed alternatives, like a remote early warning system to serve flood-prone areas. The first is in operation along the Cheat River in West Virginia and features automated sensing units which give downstream emergency offices eight to 24 hours additional warning of coming flood waters.

### Ecosystem restoration

Ecosystem restoration shows promise in Pittsburgh District on a number of fronts, notably acid mine drainage remediation and brownfield cleanup. One stream, Nine Mile Run, flows through Pittsburgh and has been contaminated from years of industrial leaching and neglect. Working under the Water Resources Development Act of 1999 (WRDA 99), the district will provide wetland enhancement, bank protection, and create various stream modifications to control storm water surges into the Nine Mile Run valley. There are thousands of miles of such streams in the former coal-mining region, and district leaders are working to identify local partners for clean-up efforts.

The district's navigation projects have provided opportunities for further ecosystem restoration, with excess dirt and mud from river work used to cap brownfields. The district's Brownfield Marketing

Team is determining potential opportunities where the federal government can play a role in the Northeast U.S.

In a similar vein, economically depressed communities can not always keep pace with the costs of infrastructure repairs, often leading to inadequate water and sewer systems threatening health and the environment. Under the South-central Pennsylvania Environmental Improvement Program, the Corps has helped solve these problems. As much as \$1 billion in new work will be needed in the region, the majority of it involving separations of sanitary and storm sewers.



### Investing in people

The district believes in investing in people, and we have embraced the Corps' 7-Castle, 5-Star Safety Recognition program. Placing a safety specialist on the district's repair fleet is a key reason for reducing the fleet's lost-time incident rate last year to zero.

The district's emphasis on leader development has led to four employees being enrolled in the Corps' Leadership Development program, and developmental assignments are used routinely in the district to give future leaders a more diverse view of the Corps.

### Recreation

Recreation customer comment cards and cost-sharing partner feedback processes have been developed to ensure the district can evaluate what it is doing right and what needs improvement.

With more than 6.4 million visitors each year, the district's recreation areas not only boost the local economies, but are also a place where people can learn more about the Corps' efforts to protect and enhance the environment. Osprey platforms, wildlife viewing areas, habitat improvement, and a cooperative effort with Trout Unlimited to rear fish at Youghiogheny Dam are a few of the success stories.

## Focus on Great Lakes & Ohio River Division



Missions carried out by Huntington District include decontaminating and decommissioning the Fernald Plant (left), and moving the business district of Grundy, Va., shown right in artist's conception. (Photos courtesy of Huntington District)

# Quality, helping others drives district

Huntington District is a busy civil works district with an annual budget of \$160-\$200 million. Geographically, the district covers parts of West Virginia, Virginia, Kentucky, Ohio, and North Carolina.

Huntington is on a quality journey. It embraced project management early and 100 projects are now being project managed. As the district enters the third millennium, the district is working to diversify its workload, improve its customer relationships, and develop innovative engineering solutions to its region's problems.

### Grundy

Grundy, Va., population 1,300, is on the move, *literally*. Its flood-prone business district will be demolished and replaced by a four-lane highway, and the new business district will be built on the other side of the Levisa Fork River above the floodplain. The 13-acre tract will be created in part by blasting away 3.9 million cubic yards of mountainside and relocating a railroad. Huntington District is developing this tract under Section 202 of the 1981 Water and Energy Appropriations Act.

This move may seem drastic, but it is necessary. Normally, the Levisa Fork flows gently northward into nearby Kentucky. However, it can quickly grow into a life-threatening river. The town suffered severe record-setting flooding in 1937 and 1957, and the 20-year cycle continued in April 1977 when the Levisa inundated the community after 16 inches of rain fell in three days. Before the river crested at 22 feet above flood stage, there was five feet of water on Main Street.

Huntington District entered a creative three-way partnership to finance the project. Initially, the district proposed a \$110 million flood protection plan for Grundy, while the Virginia Department of Highways (VDOT) proposed a \$135 million highway bypass. But both projects were in trouble. The lack of a cost-share partner stymied the Corps' flood-control proposal, and the VDOT bypass plan was going nowhere due to its high cost. Then a local state legislator suggested the projects be combined by taking the highway *through* the town rather than *around* it. The district like this because it provided three cost-share partners — the district, VDOT, and Grundy.

The approved plan takes US 460 through the cen-

tral business district, and part of the new highway will be a flood-control levee protecting the town. The required 25 percent non-federal cost-share for the flood-control project will be paid by VDOT by acquiring flood-prone structures for highway right-of-way. VDOT's project cost dropped from \$135 million to a projected \$75 million. The Corps' plan costs of \$100 million, down from \$110 million.

The plan's central feature is the new 13-acre business district. The site will be owned, planned, developed, and financed by the town. By working together, the three agencies will save taxpayers millions of dollars, alleviate destruction from flooding, improve transportation, and enhance economic development.

### Customer Service Center

Quality service is important to Huntington District, so the district established a new Customer Service Center (CSC) in December to focus on customer satisfaction.

In 1996, feedback from the Army Performance Improvement Criteria identified customer services as an area for improvement. So the district's Quality Committee (QC) established an action team to study external customer relationships and recommend improvements. The team's primary recommendation was to establish a Customer Service

Center, and a process action team to study the recommendation. These findings were presented to the QC and approved. The CSC should be operational in February.

### Support for others

Huntington District is working hard to market its capabilities to other state, local, and federal agencies. A 10-member committee coordinates marketing activities that often include presentations by the District Commander and Deputy District Engineer for Project Management.

Support for others has grown by leaps and bounds — about \$30 million of the district's \$160 million budget comes from selling services to other agencies, including:

**Federal Energy Technology Center** — Huntington received 22 tasks from the FETC. Ten are complete and 12 are still active. The partnership works both ways. The district has also given FETC

six taskers for work on NASA's Plum Brook Reactor Facilities, Lockbourne Groundwater Treatment Project, and West Virginia Ordnance Works Metals Treatment Project.

**National Aeronautics and Space Administration** — Last February, the district received \$450,000 from NASA to develop a decommissioning plan for the Plum Brook Station Reactor near Sandusky, Ohio. An interagency agreement established a framework governing the responsibilities of NASA and the Corps in the decommissioning plan, and the possibility of future tasking for different phases of the effort.

**Federal Bureau of Prisons** — The district has managed the demolition of three dormitories at the Federal Women's Prison at Alderson, W.Va., and is currently managing construction of a new \$6 million 500-bed dormitory at Alderson. Another 500-bed unit will be built in the future. Other work includes building oversight and administrative support for the Big Sandy Prison project in Martin County, Kyn., and construction management of a sewer lift station at a federal prison in Butner, N.C.

**Environmental Protection Agency** — The district has managed construction of several EPA projects including a \$19 million groundwater treatment plant at New Lyme, Ohio. The district has construction oversight for several projects in the Philadelphia and Chicago regions, and will design a landfill cap and manage construction for the project at Shafer Equipment near Cleveland this fiscal year. The district's EPA work is brokered by the center of expertise in Missouri River Division.

**National Parks Service** — For three years, the district has supported the NPS by sampling for contaminated soils near storage tanks at Nuttallburg, W.Va. As money from the NPS becomes available, current work will continue, with possible future work at Thurmond, W.Va.

**U.S. Fish and Wildlife Service** — In 1998, the district completed bank stabilization work for the USF&WS that protected two Ohio River islands from severe erosion. Huntington District is currently studying erosion affecting 21 islands purchased by the USF&WS for the National Wildlife Refuge System. The study will define loss of acreage, describe loss mechanisms, recommend treatment, estimate the cost, and prioritize stabilization efforts. The report will also allow USF&WS to seek funding to protect the islands.

(Steve Wright, Kathy Rea, and Peggy Noel contributed to this article.)



# Strategic Vision guides Detroit District

By Lynn Duerod  
Detroit District

Detroit District closely follows the Strategic Vision of the U.S. Army Corps of Engineers.

## Revolutionize Effectiveness

### New lock project

The St. Marys River Soo Locks project at Sault Ste. Marie, Mich., advances the efficient flow of commerce between Lake Superior and the lower Great Lakes. The project includes four navigation locks, connecting channels, compensating works for the regulation of Lake Superior, and a 21-megawatt hydroelectric power plant.

Currently, only MacArthur and Poe Locks actively service commercial vessel traffic. Davis Lock is rarely used and Sabin Lock, in disrepair, has been closed for several years. So 70 percent of the U.S. Great Lakes Fleet is restricted to the larger Poe Lock.

With so much traffic using one lock (86 million tons of commerce in 1998), the Corps decided another lock similar to Poe Lock was needed. The 1986 and 1990 Water Resource Development Acts authorized building a new Poe-sized lock to replace the existing Davis and Sabin Locks.

The project's detailed design phase, in partnership with Huntington District, was initiated this year. Last month, a multi-district team completed a Limited Reevaluation Report to reexamine the economic justification of the replacement lock. Taking advantage of Huntington District's experience with lock design on the Ohio River system, the design was revised to reduce costs by more than \$150 million.

### Water levels

The Great Lakes are comparable to interconnected reservoirs beginning at Lake Superior, continuing downstream to Lake Ontario, then through the St.

Lawrence River to the Atlantic Ocean. The Great Lakes Hydraulics and Hydrology Branch forecasts the water levels and publishes it in the *Monthly Bulletin of Lake Levels for the Great Lakes*.

Water supply is the portion of precipitation, streamflow, and groundwater that makes its way into the lakes. The district tracks the predicted water supplies by "routing." Using mathematical models, the forecasted water supplies are tracked through the Great Lakes system to determine future water levels at specific locations.

The district incorporates the National Weather Service's 30-day precipitation and temperature outlooks into the water supply forecast. Because weather is such a determining factor in the water available to a lake, any unforeseen deviation from the expected can have a major impact on the accuracy of water supply predictions.

Once Detroit District forecasts the water levels, it coordinates with Environment Canada because of our ties with the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data.



## Seeking Growth Opportunities

### Outreach

The district team believes the key to success in the Support For Others Program is outreach. As a result, we're increasing our outreach efforts. We have targeted our strategic customers and initiated an aggressive program of relationship building and education. This approach is successful with customers such as Milwaukee and Native American tribes. The rapport between the Corps and both Detroit and Michigan have increased significantly in recent years, and the outlook for future collaboration is good.

The education process has two components — informing customers of how Corps competencies match

their needs, and training the workforce on the importance and methods of outreach, plus defining each employee's role in outreach.

Informing customers is done primarily face-to-face. Either a team is assembled to make a formal presentation, or informal contact is made during field visits, conferences, or social gatherings. The district has developed a training course introducing the methods of outreach to employees. Most senior leaders, leadership group participants, and area engineers have been trained.

While everyone has a role in outreach, the program is focused through the district's Business Development Coordinator and the Planning Division Chief. A list of current and potential customers is on the Intranet to update everyone on the district's efforts.

## Investing in People

### Leadership development

The district's Leadership Development Program grew from the desire to develop employee leadership skills. Some goals are to improve oral and written communication skill, promote self-esteem in participants, foster team-building, and develop skill in problem-solving, decision-making, critical thinking, and conflict management.

This year-long program is made up of five two-to-five day sessions. The first session is a motivational, five-day introduction to the program. Session two focuses on communication skills. Session three highlights the principles and qualities of leadership. Session four covers many topics including conflict management, problem-solving, decision-making, and partnering.

It all comes together as participants complete a long-term team project that benefits the Corps and helps to achieve the Vision. At the last session, they present the finished product to the district leadership. In addition, participants shadow a leader for a day, listen to guest speakers, participate in hands-on workshops, and read about good leadership and teamwork.



A digitally altered photo shows how the new Soo Lock on St. Mary's River might look after construction is complete. The project will replace the existing Davis and Sabin Locks, and will include four navigation channels, and a 21-megawatt hydropower plant. (Photo courtesy of Detroit District)



The Great Lakes and their connecting channels make up the largest freshwater system in the world with a total water surface area of about 95,000 square miles (Graphic courtesy of Detroit District)

## Focus on Great Lakes & Ohio River Division

# District of the Big Shoulders

## Chicago District has major metro area for its territory

By Lynne Whelan  
Chicago District

Chicago District is responsible for water resources development in the Chicago metropolitan area, an urban zone of about 5,000 square miles with a population of about eight million covering 17 congressional districts.

In 1833, the Corps of Engineers built a harbor at the mouth of the Chicago River. The city soon became an important shipping center and, in 1870, the Corps established Chicago District.

From 1844 to 1915, the Corps built harbors and harbor improvements along the Illinois, Indiana, and Wisconsin shorelines, and in the 1930s completed the Illinois Waterway, linking Lake Michigan with the Mississippi River.

From the 1940s through the 1970s, the district was involved in many military and civil construction projects including Nike missile bases, the military facility at O'Hare, widening the Cal-Sag navigation channel, and building Burns Harbor.

In the 1980s, the district's support for others grew to include providing construction assistance to the Environmental Protection Agency (EPA) wastewater treatment Construction Grants Program, and the environmental cleanup "Superfund."

The district in the 1990s has developed an enhanced environmental program, begun several major flood prevention projects in Illinois and Northwest Indiana, and participated in numerous flood relief and damage assessment efforts. The district also directed the emergency relief effort for the Great Chicago Tunnel Flood.

As we approach 2000, the district is involved in many projects stemming from its primary mission areas of flood control, shoreline protection, navigation, environmental protection, emergency management, and support for others.

### Flood control

Sewers carrying both stormwater and raw sewage serve Chicago and 51 neighboring communities, an area of 375 square miles. Due to high urban development, stormwater runoff frequently exceeds sewer capacity, backing up into basements and overflowing into area waterways.

To combat this flooding, the Tunnel and Reservoir Plan was developed to collect and hold the flow until it can be safely released into the sewer system. The Corps is building the reservoir portion of the plan. The district completed the 350-million-gallon O'Hare Reservoir in 1998. The district will begin building the 7.5 billion gallon, \$405 million McCook Reservoir in 2000. Construction of the third reservoir, at Thornton, with a capacity of 6-8 billion gallons, will begin around 2005.

Another major project is the Little Calumet River Flood Control and Recreation Project, currently about halfway complete. The \$184 million project involves building levees and floodwalls, enhancing wetlands, and creating recreation areas along 22 miles of the Little Calumet River in Northwest Indiana.

The district has several major flood control studies underway, such as the Des Plaines River Flood Damage Reduction Study to examine alternatives for reducing flooding in 33 municipalities along 67 miles of river in Illinois. Another study, the Kankakee River Basin Flood Control Study, evaluates flooding



Tour boats travel through Chicago Lock. (Photo from the Digital Visual Library)

and its causes, land use practices, and environmental issues in the 5,200-square-mile basin in Indiana and Illinois.

The district is also involved in several smaller flood control projects including Stony Creek, Deer Creek, Tinley Creek, Hickory Creek, Natalie Creek, Squaw Creek, Fox River, Algonquin and Stratton dams in Illinois, and Sumava Resorts and Cady Marsh Ditch in Indiana.

### Navigation

Chicago District maintains seven harbors on Lake Michigan — Waukegan, Chicago, and Calumet Harbors in Illinois; and Burns International, Burns Small Boat, Michigan City, plus Indiana Harbor in Indiana. The district also operates the Chicago Lock, which handles nearly 63,000 vessels and more than 900,000 passengers annually.

Last year the district completed several major repairs to the gate seals, tracks, rollers, and hinges of the Chicago Lock, and prepared a Major Rehabilitation Evaluation Report for future improvements to the lock and lock structures.

Lack of a suitable disposal site for the one million cubic yards of contaminated sediments at Indiana Harbor has prevented dredging since 1972. A plan developed jointly by the district and EPA Region 5 calls for building a disposal facility on an active Resource Conservation and Recovery Act site in East Chicago, Ind.

When the Project Cooperative Agreement is approved, construction will begin in 2000.

The district is completing the feasibility study for building a confined disposal facility near Waukegan Harbor and dredging the inner harbor. The district is scheduled to begin preconstruction engineering and design in fiscal year 2000.

The Chicago Sanitary and Ship Canal links the Great Lakes and Mississippi River. But it also lets aquatic nuisance species, such as the round goby (a small carnivorous fish), travel between the two wa-

ter basins. To protect the Mississippi River and Great Lakes ecosystems and economies, the district will install an electric barrier to deter aquatic nuisance species. Construction will begin next May.

### Shoreline protection

Chicago has 30 miles of Lake Michigan shoreline, nearly all publicly owned. The existing shore protection structures, built in the early 1900s, are no longer structurally sound. Without intervention, about 11 miles of structures will fail. The Chicago Shoreline Project involves rebuilding revetments to prevent storm damage to a \$5 billion infrastructure. Chicago District and its local sponsors, Chicago and the Chicago Park District, have improved several portions of the shoreline, to include rebuilding a breakwater which protects a water purification plant serving 2.5 million people. The \$301 million project is scheduled for completion by 2005.

The district is also studying storm damage problems along the Lake Michigan shoreline between Waukegan and Wilmette harbors in Illinois, and providing beach nourishment along the Indiana Dunes National Lakeshore. In Indiana, several smaller erosion protection and/or ecosystem restoration projects are underway at Deep River Basin, Wolf and George lakes, Beauty Creek Watershed, Ogden Dunes and Beverly Shores.

### Support for others

In the SFO arena, the district is involved in environmental restorations for the Department of Defense; Superfund cleanups for EPA; housing authority inspections for Housing and Urban Development; brownfield remediations for Chicago; design overview and construction rehabilitation for the Immigration and Naturalization Service; lab decontamination for the Food and Drug Administration; Geographic Information Services for Northeastern Illinois Planning Commission; Value Engineering studies for the Fermi National Accelerator Laboratory; and emergency broadcasting facilities for the Federal Emergency Management Agency.



## Focus on Great Lakes & Ohio River Division

# Louisville serves both civil, military

By Todd Hornback  
Louisville District

Louisville District's history is rooted in Ohio River navigation, especially at the Falls of the Ohio in Louisville, Ky., where, in 1872, Army engineers widened an existing canal and built a two-flight lock, the world's largest at that time. In 1886, Maj. Amos Stickney became the first district engineer. Louisville District took a major role in canalizing the Ohio River, and by 1929 there were 50 locks and dams from Cairo, Ill., to Pittsburgh, Pa.

The district expanded its civil role in the 1940s by building local flood protection projects. In the next years, the district built 20 multi-purpose flood reduction lakes as part of the 78-lake system to control flooding in the Ohio River Valley.

World War II ushered in the district's military construction mission. In 1940, the district started work in the airport construction program and one month later started building Army Air Force installations. This work expanded to include real estate acquisition, construction, and maintenance for Army facilities.

The district continues providing quality engineering services to civil and military customers. The civil works mission includes navigation, recreation, flood reduction projects and studies, emergency management, and regulatory activities. The district serves the Army, Air Force, and Army Reserves through installation support, base realignment and closure, design, construction, and environmental cleanup.

### Civil works

The district's civil works cover 20 lake projects in Kentucky, Ohio, and Indiana, and 14 locks and dams on the Ohio, Kentucky, and Green rivers. The district has more than 275 miles of levees, 20 miles of floodwalls, and 43 locally maintained protection projects that have prevented more than \$4 billion in flood damages.

On the lower Ohio River, the busiest stretch in the inland navigation system, the district is building the Olmsted Locks and Dam. The project will cost more than \$1 billion, with the navigation industry paying more than \$500 million. It will have twin 1,200-foot locks with a navigable pass. Other engineering and design aspects include seismic considerations because of the lock's proximity to the New Madrid Fault zone.

Also on the Ohio River, the McAlpine Locks and Dam Replacement Project will provide an additional 1,200-foot



Bradley Fighting Vehicles fire on a range built for them at Fort Knox, Ky. (Photo from the Digital Visual Library)



Construction workers seem lost in a maze of rebar at Olmsted Lock and Dam. (Photo from the Digital Visual Library)

lock chamber at the Falls of the Ohio. The Waterways Trust Fund will cost-share this \$316 million project. The project will have twin 1,200-foot locks to accommodate projected increases in commercial traffic. The renovation should be complete by 2008.

All 19 navigation locks and dams on the Ohio River will be evaluated in the Ohio River Mainstem Systems Study. This \$45 million study will develop a master plan for maintaining a viable navigation system on the Ohio River. Study activities include designs and costs for innovative lock expansion; identifying benefits for lock expansions at various sites; and developing reliable data and models to better identify long-range operation and maintenance needs of aging facilities.



This track will carry moving targets on a tank firing range at Fort Knox, Ky. (Photo from the Digital Visual Library)

As part of the maintenance program, the Louisville Repair Station follows an annual rotation to keep the district's locks and dams operational and safe. To assist this work, a new Gate Lifter, named the *Henry M. Shreve*, can carry two Ohio River gates in a vertical position. The lifter can lift 460 tons, and its maximum reach is 190 feet.

### Military programs

On the military side, the district supports the active and Reserve forces. Since the district established the Reserve Support Team, the Office of the Chief of Army Reserves gave the district the lead in several Reserve programs. Louisville is the purchasing agent for the Reserve Furniture Program, Design Agent and Program Manager for the Reserve Facility Revitalization Program, and provides professional service support to the Reserves.

The district placed Program Managers Forward at Forts Knox and Campbell, both in Kentucky, and an environmental program manager at Fort Campbell to open communication between the district and customers.

The district was the first in the Corps to complete ISO certification for Engineering and Construction divisions, and is working on certifying the Project Management Division. ISO certification requires a quality statement, manual, business plan, and measurements for success. These documents are accessible on the district homepage.

Looking ahead, the district is forming a Business Practices Branch with a Director of Quality and positions for Workforce Development and Best Business Practices.

The district continues to serve military customers through design and construction. At Fort Knox the district oversaw the modernization of Korean War-vintage barracks and built new single-family houses in Pritchard Place Housing. The district renovated the Army Recruiting Command Headquarters by restoring two historic buildings and connecting them with a new atrium.

With assistance from the Walt Disney Company, the district built the Mounted Urban Combat Training Range which simulates battle in a city for tank crews and infantry. A similar project is under construction at Fort Campbell.

At Fort Campbell, home of the 101st Airborne Division (Air Assault), the district is building a Railroad Connector from the base to a main rail line to enhance troop mobility. Also at Fort Campbell, the district continues building the third phase in a barracks complex which includes three barracks buildings; one dining facility; one brigade headquarters; six battalion headquarters with classroom buildings; and 11 small, eight medium, and five large company operations and supply facilities.

At Wright-Patterson Air Force Base, Ohio, the district has finished three phases of a 10-phase project to support the base's aircraft acquisition function. The Acquisition Management Complex includes a 120,000-square-foot office building for about 630 people.

For the Defense Supply Center, Columbus in Ohio, the district completed a 579,000-square-foot, \$82 million Defense Finance Administration Support Center identical to the Defense Supply Center Columbus Operations Building completed in 1997 for \$89 million.

The district also continues environmental restoration at formerly used defense sites. Presently, the district has 145 projects on 52 sites. For the Installation Restoration Program, the district has six projects on three sites. Under the Formerly Utilized Sites Remedial Action Program, the district supports five sites.



# Nashville District looks to future and people

Article by Lt. Col. Pete Taylor  
Photo by Bill Peoples  
Nashville District

While Nashville District has a proud past of providing navigation, hydropower, recreation, and flood control on the Cumberland and Tennessee river systems, today the district's focus is shifting from operations and maintenance (O&M) activities to a growing construction and Support for Others (SFO) program. At the same time, the district is preparing for the future by developing its workforce through one of the Corps' best diversity programs, and through two leadership development programs.

## A proud history

Nashville District was established in 1888 to improve navigation in the Cumberland and Tennessee river basins. Through a series of locks and dams, these rivers provide 1,175 miles of navigable waterways, 10 percent of the navigable inland waterway system. During World War II, the district built facilities at Smyrna Air Force Base and Fort Campbell, Ky.

During the 1940s to 1960s, 10 reservoirs were built on or beside the Cumberland River to provide flood control, navigation, hydropower, and recreation. During the 1970s and 1980s, the district's efforts were focused on the Tennessee-Tombigbee Waterway, providing engineering and construction expertise to build the Divide Cut. More recently, the district has been involved in extensive flood damage reduction efforts in eastern Kentucky.

During the 1920s, Nashville District built Wilson Lock and Dam on the Tennessee River, the first hydropower plant run by the Corps. In 1933, the Wilson Dam and Lock was transferred to the Tennessee Valley Authority (TVA). The district and TVA still enjoy a close working relationship and partner on a number of regional issues including navigation, water quality, a joint regulatory program, and design and construction of the new addition at Kentucky Lock.

Today, the district has more than 820 team members committed to providing a full range of professional engineering, construction, regulatory, emergency management, and real estate services to portions of Tennessee, Kentucky, Alabama, Mississippi, Georgia, North Carolina, and Virginia.

## District program

Nashville District's program has a budget of \$140 million for fiscal year 2000. In the next five years, the program will grow to more than \$180 million, with most of the growth in the construction and SFO programs. Much of the growth can be attributed to Nashville's Account Executive program and strategic partnerships with Tennessee and the Metropoli-

tan Government of Nashville and Davidson County.

The new \$533 million Kentucky Lock addition has brought the district and TVA even closer, since TVA is a partner and sponsor in this project.

Although construction has started, the district is still heavily involved designing the lock. The new 1,200-foot chamber at Kentucky Lock will enable commodities from 26 states to flow to and from the Tennessee Valley. The design team, which includes representatives from TVA and the navigation industry, saved \$108 million from the initial cost estimate.

The district's Continuing Authorities Program is one of the largest in the Corps, with 48 projects underway and scheduled expenditures of \$6.9 million this fiscal year. Last year, the program gained 14 projects and \$4.1 million. As the district's account executives meet with local officials to explain this program's benefits and the wide range of work that can be performed, the district expects more work through this program.

The SFO program has grown more than 200 percent in the last three years, and has been recognized as one of the best in Great Lakes and Ohio River Division. A wide range of federal and non-federal customers has tapped Nashville District to solve their engineering, environmental, and real estate problems.

Recent SFO successes include an \$8 million stream bank stabilization at Shiloh National Battlefield Park; feasibility efforts for the Southeast Power Administration which may result in a \$69 million non-federally funded upgrade of the Wolf Creek Power Plant; real estate efforts for the Kentucky Bureau of Prisons; and joint planning and design with Huntington and Mobile districts for flood damage reduction in Nicaragua for the U.S. Agency for International Development.

Nashville has also seen significant growth as a civil works Hazardous, Toxic, and Radiological Waste Design Center. It provides a wide range of environmental services for the Environmental Protection Agency, the Department of Energy, Forts Campbell and Knox in Kentucky, and the Defense Fuel Supply Agency.

While Nashville District is focusing on the future through its construction and SFO programs, it still maintains a large active O&M program with responsibilities for navigation, recreation, and hydropower. With responsibility for 18 locks on the Cumberland and Tennessee rivers, the district has an active navigation program. More than 75 million tons of commodities are shipped through these locks each year. All of the locks on the Tennessee River are owned by TVA, but operated and maintained by the district.

Nashville District has a prosperous recreation program, with six of its lakes in the top 25 most visited lakes in the Corps. They provide recreation opportunities to nearly 40 million visitors annually, with a \$1 billion regional economic impact. The district's 51 commercial concessions, 12 percent of the Corps' total, generated \$51 million from customers and earned more than \$1 million in rent last year.



Lt. Gen. Joe Ballard, Chief of Engineers, watches Laron Walker, an engineering graduate student at Tennessee State University, demonstrate robotic navigation.

The district also has a robust hydropower program. Nine hydropower plants produce \$35 million worth of power annually. The operators and maintenance staffs provide more than 98 percent availability and less than .04 percent forced outages, some of the Corps' best operational rates.

## Developing the Nashville team

Throughout its history, the district has met challenges with creative, innovative approaches. One recent approach was improving workplace diversity by joining the Advancing Minorities' Interest in Engineering (AMIE) coalition. AMIE boasts a membership of more than 150 corporations, educational institutions, and government agencies.

To advance AMIE's objectives and invest in the Corps' future, Nashville entered into a formal partnership with Tennessee State University (TSU), a historically black college in Nashville. District employees serve as guest lecturers and provide subjects for senior engineering projects. The district also introduced TSU students to engineering by hiring them as co-ops and summer interns and by providing tours of its projects. The new partnership makes the district TSU's One-Door-to-the-Corps for AMIE, and the district recently coordinated co-ops for Europe, Alaska, and Detroit districts.

With successful, growing programs and projects, Nashville District has a bright future. To prepare for it, the district established a Leadership Development Program (LDP) two years ago. It includes 80 hours of formal classroom training in leadership, communications, and quality management at a local university. The year-long, part-time program also includes visits to local corporations, participation in executive meetings and decisions, and community involvement. Finally, LDP participants work on projects that solve real-world challenges in the district.

LDP has been so successful that the district will implement a similar program focusing on primary leadership and management skills for those who would like training on the fundamentals. The EAGLE (Employees Achieving Greatness and Leadership Excellence) program will debut this year. It will develop leaders who have the understanding and tools necessary to lead the district into the future.



## Focus on Great Lakes & Ohio River Division

Buffalo, Chicago, Detroit, Huntington, Louisville, Nashville, Pittsburgh

# 'Safety Pays' in Jacksonville District

By Christina Plunkett  
Jacksonville District

"Safety pays" is an old adage, but in Jacksonville District it has real meaning.

This is the first year of the district's Safety Pays Program, and it got off to a great start by recognizing two contractors for excellent safety records. One winner, Caribco International, Inc., is the district's Safety Pays Contractor of the Year.

The purpose of the Safety Pays Program is simple — to raise safety awareness at all levels of the government/contractor partnership. How it works is also simple. The district's field offices nominate contractors semi-annually with deadlines on April 15 and October 15. Winners are selected by a Safety Review Board (SRB) chaired by the Chief of Construction-Operations Division. The winner receives a certificate and a letter of recognition; copies are forwarded to the contractor's insurance and bonding companies.

The first semi-annual winner was Custom Built Marine Construction, Inc.; the second was Caribco. At the end of the year, the SRB compared the two semi-annual winners and selected Caribco as the Contractor of the Year.

Caribco, a member of the Small and Disadvantaged Business Program, won for storage tank removal and remediation work at the former Ramey Air Force Base in Aguadilla, Puerto Rico.

"What's impressive about this contract, along with being one of the largest the district has ever awarded to a Small Business Section 8(a) firm, is the work was performed in an exemplary manner with a spotless safety record," said Debra Nix, Small and Disadvantaged Business Program Deputy.

The project involved two phases of complex tank removal and remediation that posed a huge danger of large-scale contamination. Phase I was removing, purging, cleaning, dismantling, and disposing of 35 underground storage tanks (USTs) varying from 25,000 to 50,000 gallon capacity, along with their pipes, valves, pumps, and pump houses. Crews had to work with heavy equipment and on scaffolds to excavate the tanks. They were in danger of exposure to a multitude of contaminants while cleaning and dismantling the tanks with acetylene cutting torches.

Phase I also involved destroying a concrete building and disposing of debris contaminated with lead paint, and packing various PCB transformers into drums for later disposition.

Phase II removed and disposed of 17 more USTs, plus four above ground storage tanks (ASTs). The ASTs varied from 420,000 to one million gallons. Phase II also included the cleanup and grouting of about 10.5 miles of underground piping.

The health and safety risks of such work are enormous. The hazards of excavating and lifting such huge tanks, plus the hazards of demolish-



Employees of Caribco International check for toxic gases. (Photo courtesy of Jacksonville District)

ing them, were an on-going challenge. Besides the possibility of explosion and contamination while removing the USTs and ASTs, contractors also dealt with lead abatement and disposal, working in confined spaces and with fumes, chemicals, and PCBs, and the risks of high pressure washing and grouting.

Then there was the project's location. Both the Aguadilla Airport and the University of Puerto Rico occupy the former Ramey Air Force Base, so the contractor had to schedule many activities during less busy periods to minimize the risk of exposure to the popu-

lation. Because most of the underground piping runs underneath the active airport runway, the work had to be closely coordinated with the Puerto Rico Ports Authority. And special care had to be taken when removing USTs close to university buildings.

"It's noteworthy that for the entire length of the project, almost a year-and-a-half, no safety deficiencies were ever found in the contractor's operation, and no accidents occurred," said Jose Rosado, Acting Chief of the Antilles Construction Office.

Much of Caribco's success was due to hiring good subcontractors like

ENSR, Inc., a firm specializing in environmental restoration. Besides strict compliance with regular safety requirements like training, toolbox meetings, and safety documentation, ENSR's safety and health personnel developed a special safety plan and closely monitored its implementation. Caribco performed specialized tank removal with Right-Way Environment Corp., which also had complete knowledge of safety and environmental requirements.

The involvement of Corps quality assurance people, Caribco's president, and subcontracted environmental safety specialists also helped Caribco's outstanding safety record.

Hector Benitez, Quality Assurance Specialist, (and Safety Officer for the Antilles Office) oversaw all stages and challenges of the project. Caribco President Rafael Jackson visited the site weekly and helped ensure all required safety documentation was accurate and timely. Rita Lebron, ENSR Safety Engineer, led several safety conferences before the project began. The conferences addressed a number of health and safety topics, including site hazards identification, levels of protection, basic first aid, and exposure guidelines. Lebron also reviewed these topics in weekly safety meetings, and during new employee briefings throughout the project.

"Caribco International proved that even a small business that's fairly new to such serious environmental remediation work can achieve an accident-free environment by putting safety first," Nix concluded.

## Engineers keep learning in LRD

By Melanie Dickens  
Little Rock District

Arkansas requires continuing education for registered engineers and architects. When the requirement was established in 1996, Little Rock District decided to do more than encourage employees to participate. Instead of engineers and architects searching for continuing education classes, the district brought the classes to them.

The State Board of Registration for Professional Engineers requires engineers to get 15 hours of Continued Professional Competency (CPC) each year to maintain registration. Arkansas' licensing board for architects requires 12 hours of continuing education.

Jack Woolfolk, Chief of Engineering Division when the requirements were set, saw that in-house training programs would help meet the requirements, and enhance the competence of all district architects, engineers, and professionals in related disciplines.

Woolfolk put together a CPC committee of mid-level engineers who were familiar with district operations and training needs to develop the format for the in-house seminars. The seminars (one to four hours long) are presented



In-house training seminars help Little Rock District professionals meet state training requirements. (Photo courtesy of Little Rock District)

quarterly and videotaped for use in field offices and for make-up sessions.

"Private organizations provide similar workshops, but at a price," said Wayne Lewis, Chief of Construction Branch. "Plus, most are not held locally. All of ours have been accomplished at no cost to the employee."

The program was first designed for architects and engineers, but the district soon recognized the training would

benefit other disciplines.

Besides opening the training to other disciplines, the district invited professionals who work for its customers. Engineers from Little Rock Air Force Base and the 90<sup>th</sup> Regional Support Command have attended. This helps them meet professional registration requirements, and helps build partnerships between district engineers and their main customer's engineers.

# 'Reckless abandon' saves FEMA folks

By Tim Dugan  
Mobile District

Doug Nester's wife, Marlene, shakes her head and says that he just must be compelled to rescue people. Years ago, Nester chased down a man on the street that had just robbed someone. When the police arrived, he was restraining the thief.

"I can't really explain the feeling I get when these situations arise, but it's something like a knot in your stomach that won't go away," Nester said. "My old high school football coach would have called it reckless abandon."

Nester, a biologist and study manager in the Coastal Environment Section of Mobile District, was recently rewarded for that "reckless abandon." In January 1998, Nester rescued two people in trouble in the rough waters of the Pacific Ocean.

He was in Guam with the Corps' Logistics Emergency Response Team after Typhoon Paka. On Jan. 18, 1998, Nester and other federal employees attended an official function sponsored by the Guam government for national relief agency workers at Sirena Beach. While on the beach, Nester saw two Federal Emergency Management Agency employees in danger of being swept away from the shore.

They were frantically trying to break away from the strong currents and assist each other, but the rough seas proved too strong and continued to pull them farther out. Then they got separated. One (Angel Santiago) tried to swim to shore, but the other (Terry Thornton) couldn't break away from



In 1998, Doug Nester (left) helped rescue Terry Thornton and Angel Santiago from the ocean. In the right photo, Thornton (left) and Santiago express their thanks. (Left photo by Adrien Lamarre, right photo courtesy of FEMA)

the current and was swept farther from shore. Santiago made it to a coral reef, and the heavy seas slammed him into it several times before depositing him on top.

Recognizing the danger, Nester asked who was in charge of the function. Someone pointed out Carl Gutierrez, Governor of the Territory of Guam. Nester explained the situation, and Gutierrez pulled out his cell phone and called for help.

Fearing that Santiago would be washed back out to sea, Nester swam out to the reef and brought the bleeding victim to shore, assisted by a U.S. Navy diver and the governor. Thornton was pulled out nearly an hour-and-a-



half later by a rescue unit.

Nester received official commendation for his alert, rapid response to a dangerous situation. South Atlantic Division Engineer Brig. Gen. Richard Capka presented him the Meritorious Civilian Service Award.

"The feeling I got as I waded and swam out to Angel was the adrenaline rush," Nester said. "It was a good feeling. At the same time, though, I felt hopelessness, knowing how long Terry was out there and the stamina required to endure the current and waves, and the fear that must have been going through her mind. I prayed, as did we all, that she would make it."

Nester has kept in touch with

Santiago and Thornton. Thornton says she has gone from euphoria to deep depression, but the experience forced her to analyze and prioritize her life.

Nester is no stranger to the danger of rough water.

"Years ago, in my 20s, I was a recovery diver for the Mobile County Sheriff's Office. For about three years I responded to emergency calls only to assist in recovering a body. Never did I experience the recovery of a living breathing person. I left the recovery team because I was unable to endure constantly bringing back a body, especially kids. I'm glad I was finally able to actually rescue someone."

## Border Patrol to get new home in Arizona

By Joan Mier  
Albuquerque District

The Border Patrol's Yuma Sector Headquarters on the north side of Yuma, Ariz., is growing, and converted house trailers serve as offices to accommodate the sector staff's increase. It's no wonder the staff anxiously awaits completion of a new headquarters building and vehicle maintenance and warehouse facility large enough for current needs and future expansion.

Albuquerque District is managing the \$15 million project. The first phase, a 40,670-square-foot vehicle maintenance and storage warehouse facility, is under construction at the 20-acre site leased from the city. It will contain some administrative offices, 10 bays for vehicles, and shops for carpentry and electronics, said Leo Lucero, the district's technical leader on the project. Completion is expected in March 2001.

The project's next phase includes building the 31,700-square-foot headquarters building, which is in the design phase. The second phase also includes a fuel island and car wash. Albuquerque District plans to award that contract next October.



The Border Patrol's Yuma Sector Headquarters will meet future needs and allow future expansion. (Graphic courtesy of Albuquerque District)

"We're very overcrowded at our present location," said Alfredo Casillas, Yuma Sector's Information Officer. "This project will consolidate a lot of our operations that are scattered in various areas right now. This will enable us to have a much more efficient operation."

Currently, there is no room for storage, and garages and maintenance facilities are spread out in several dif-

ferent locations.

The complex's design has room for expansion, a crucial element to a growing organization like the U.S. Border Patrol. This year, the Yuma Sector apprehended 93,388 illegal immigrants, a record high. They currently have 231 sworn officers, up from 171 in 1996. The sector would also like to add an anti-smuggling unit office building in the future.

"This also means we have more support personnel," Casillas said. "The more illegal immigrants you have, the more agents you need, which means more vehicles and people to support them. Thanks to the outstanding help of the Corps of Engineers, we'll have the room to add a helicopter landing pad and a maintenance and storage hangar in future years."

The Yuma Sector staff currently includes a chief patrol agent, assistant chiefs, intelligence unit, a support staff including administrative officers, dispatchers, intelligence analysts, and purchasing clerks, all dedicated to halting illegal immigration in the area. The sector covers 73,000 square miles, including 118 miles of border with Mexico that it must patrol.

"This will save us time and money," said Casillas. "We want to do anything we can to be more efficient in furthering the goals of our organization. We've used the services of the Corps of Engineers here for several years, and we wouldn't be using the Corps if we weren't satisfied with the work they do. Because of them, we've been able to do a lot of good things that we currently don't have the staff and services to accomplish."

# Around the Corps

## Contact-a-Professional

In most school systems, students usually must wait for engineers and scientists to come to the classroom. In Vicksburg, Miss., they just push buttons on computers.

"Last year, we asked a panel of teachers what we could do to help them in the classroom," said Michael Logue, Public Affairs Officer of Vicksburg District. "They wanted student and teacher access to our people through the Internet."

The result was the Contact-A-Professional Page on the district's web site, where students and teachers communicate directly with experts using e-mail. The page features Corps experts from archeologists to engineers, and topics from bank stabilization to wetlands.

"Our teachers not only wanted people who could communicate with students on any topic, but who could also help them stay current in their career fields," Logue said.

"There are a lot of web sites on the Internet that are primarily for show, but this is something that's meaningful," said Ed Wong, a social studies teacher at Vicksburg High School. "I'm astounded at how large and diverse the Corps is."

Wong said the site would be used not only locally but also all over the world.

"Last year, I was contacted by an elementary class in Australia which was studying the Mississippi River," he said. "Now, they hook up with an Vicksburg District expert on anything they want to know about the river."

Vicksburg District's education page can be reached on the Internet at <http://www.mvk.usace.army.mil/pao/teachers.htm>.

## WVU partnership

The 1999 recreation season brought many changes at Burnsville Lake in Huntington District. Seven local college students were hired to operate the Bulltown Historical Area and run the Bulltown Campground Entrance Station. These jobs provided students from West Virginia University (WVU) and Glenville State College with summer jobs offering both work and fun.

Dr. Theresa Wang, Assistant Professor in the Division of Forestry at WVU, gave the students an on-site training seminar on interpretation. She helped obtain grant money, provide training, developed a Comprehensive Interpretive Plan, developed a network of contacts for the Corps with other agencies, and other much-needed assistance. Craig Parks, a graduate student at WVU, also provided valuable help.

Through partnerships with WVU and the local communities, daily activities were conducted with day visitors and campers throughout the summer. These programs gave the public a better understanding of the culture and history of rural West Virginia, and gave kids quality activities to enjoy while visiting Bulltown.

## Camp Beale investigation

The Topographic Engineering Center's Environmental Analysis Group was tasked to complete a comprehensive Geographical Information System-based historical photographic analysis of the former Camp Beale in Marysville, Calif. Camp Beale was established in 1942 as a World War II Army training base.

This analysis will help Sacramento District and the Huntsville Mandatory Center of Expertise define areas to investigate for unexploded ordnance and chemical weapons material.

To locate these areas, the group analyzed more than 700 photos from 1941, 1943, 1947, 1953, 1962,

and 1964 for signs of ordnance activity. They combined old photos into image maps, then areas that showed signs of use possibly related to ordnance activities were identified. Sacramento District and the Huntsville Center are moving ahead with their site investigation and remediation plan for former Camp Beale property.

The Environmental Analysis Group also helped educate local residents who live in and around former Camp Beale through its participation in public meetings and workshops.

## Researchers honored

The American Society of Civil Engineers (ASCE) recently recognized three researchers in the Construction Engineering Research Laboratory.

Vince Hock, Susan Drozd, and Michael McInerney developed technologies that were finalists for the Charles Pankow Award for Innovation at the ASCE's Civil Engineering Research Foundation's 10<sup>th</sup> Anniversary Awards Dinner. The "Electroosmotic Pulse Technology for Groundwater Intrusion Control" and the "In-Situ Chemical Stabilization of Lead-Based Paint Waste from Abrasive Blasting Technology" were two of four finalists for the award.

Electroosmotic pulse technology prevents water seepage in below-grade concrete structures. Electroosmosis is an electrically charged liquid moved by an external electric field. The system mitigates water seepage problems and yields 40 percent savings.

The chemical stabilization of paint waste technology blasts lead-based paint from structures with a calcium-silicate based material that chemically stabilizes the lead. The residue can be disposed of as non-hazardous waste. This results in cost savings of up to 30 percent.

## Interoperable web mapping

The Topographic Engineering Center (TEC) and an international team of geospatial technology vendors has submitted a request for comment titled "Web Map Server Interface Specification to the Open GIS Consortium."

It defines interfaces necessary to allow overlays and combinations of geospatial information to happen automatically on the Internet, despite differences in vendors' systems. Multi-vendor technology solutions based on drafts of this specification were demonstrated during the Web Mapping Testbed (WMT) Demo at the Lockheed Martin Management and Data Systems headquarters in Gaithersburg,

Md., on Sept. 10.

This marks an important milestone for WMT, enabling interoperable web-based mapping technology to become a reality. Applications for interoperable web mapping include environmental management support, emergency management, disaster relief, and military humanitarian relief and stabilization operations.

## Correction

In the November issue of *Engineer Update*, the introduction to the North Atlantic Division special section stated that "NAD built ports, bridges, roads, assembly plants, and military installations in Saudi Arabia that proved valuable during the Persian Gulf War."

These facilities were actually built by Middle East Division, a predecessor to Transatlantic Programs Center. The \$14 billion program was fully funded by the Saudi Arabian government, and included military contingents, headquarters complexes, air bases, navy bases, ports, and training centers. These facilities *did* support allied operations in the Persian Gulf War.

## Air Force awards

The Air Force in the Pacific is impressed with work done by the U.S. Army Corps of Engineers in 1999. They named Alaska District their Agent of the Year in the Construction category; and Greg Smith, a mechanical engineer with the district, their Project Manager of the Year in the Design category. The citations were presented at the 1999 Pacific Air Force Command's Civil Engineer Conference on Oct. 26.

Stanley Yasumoto, PACAF's Chief of Engineering, said that Alaska District provided the "most professional management in the construction of Air Force projects" in managing eight military projects in Alaska valued at \$310 million.

Smith was recognized by the Air Force for his skill as a project manager and for pioneering Alaska District's design charrette into an extraordinary design tool.

## Lifetime Achievement Award

Dr. Ed Middleton, Jacksonville District's Engineering Division chief, received the Bentley Systems Inc. Lifetime Achievement Award. It was presented to Middleton for his work in advancing information technology and his impact on the entire engineering industry.

## Preserving nature is nothing new

*(Editor's Note: This year marks the 225th Anniversary of the U.S. Army Corps of Engineers. During the coming year, each issue of "Engineer Update" will include a brief glimpse into Corps history. All material will come from the History Office publication "Historical Vignettes — Volume 2," EP 870-1-1, published in May 1979.)*

Involvement of the Corps in preserving and enhancing recreational opportunities goes back more than 100 years to Yellowstone's first days as the original national park. Western expansion was so rapid that that exploring the frontier actually overlapped the arrival of tourists. In 1875, Capt. William Ludlow entered the Yellowstone area leading a reconnaissance party. And there were sightseers, like harbingers of the future, already carving their initials, scattering rubbish, and breaking off pieces of rock formations.

Alarmed by what he saw, Ludlow spent most of

his time pleading with visitors to respect nature's work. He stopped one woman, poised with a shovel over a mound of mineral deposits formed for thousands of years by a bubbling spring, just before she did irreparable damage.

But even his frantic efforts were far from adequate. He wrote, "Miracles of art can be ruined in five minutes by a vandal armed with an axe, and nearly all the craters show signs of [this] hopeless and unrestrained barbarity."

Ludlow's exploration did not amount to much, but his efforts on behalf of Yellowstone did. In his report, he proposed several ways to preserve the park. All the measures he suggested (calling in the Army, letting troops patrol the land, and have the engineers build roads) were adopted. Thanks to Ludlow, who provided the blueprint for saving the park, Yellowstone remains among the crown jewels of America's scenic wonders.



From force protection to creature comforts, Baltimore District improved the quality of life for soldiers in Kosovo. Now a team from New York District will continue the work. (Photos by Dana Finney)

# N.Y. team takes over in Kosovo

By Torrie McAllister  
Europe District

Deployments are tough on family life.

Bob Gerrits knew he wouldn't be home for Christmas, so he celebrated early in November. He whisked his three children (8, 5, and 17 months) off to the "Christmas in Hershey" in Pennsylvania as soon as Santa came to town. Then he packed three duffel bags full of battle dress uniforms and cold weather gear and headed for Kosovo where he is now the U.S. Army Corps of Engineers' project manager at Camp Bondsteel.

Gerrits is one of 11 civilian and three military engineers from New York District who arrived at Camps Bondsteel and Monteith on Thanksgiving eve to begin their six month assignment managing the Base Camp Coordinating Activity (BCCA) for the Task Force Falcon Engineer.

The New York team took over from 25 Baltimore District civilians and three military who had volunteered to join the first U.S. units on the ground in Kosovo. The Baltimore team mobilized last July with combat and combat heavy engineer units and Navy Construction Battalions (Seabees). Together they spent six months preparing base camps for the 7,000 U.S. peacekeepers.

The Baltimore team, led by Lt. Col. Pat Guinnane, helped plan, design, and manage the transformation of a 700-acre wheat field and a former Yugoslav Army facility into two secure, though temporary, military bases. By the time they left, they had engineered everything from airfields and motor pools to sanitation facilities. Their crowning achievement was coordinating efforts to ensure that all U.S. troops were out of tents and into temporary barracks before the first snowfall.

When New York District's engineers rejoin their families next April, Europe District will send in a semi-permanent team. These engineers will be recruited and hired for year-long assignments. Europe District already has semi-permanent teams supporting BCCA in Bosnia and Hungary. They perform many of the roles of a stateside Directorate of Public Works and are ready to help as long as the mission continues.

Supporting peacekeepers is a new role for the Corps. It began in Bosnia with the first base camp planning for Operation Joint Guard and has evolved ever since.

"Peacekeeping operations in the Balkans present a whole new challenge for the Army engineers," said



Europe District Commander Col. Michael Pelkey (center) and New York District Team Chief Lt. Col. Byron Jorns (right) introduce their staffs. (Photo courtesy of Europe District)

Col. Michael Pelkey, Europe District Commander. "We have to quickly set up temporary base camps that are fully capable of supporting our modern, high-tech force. They have to be durable enough to handle several years of rugged use, if necessary. And we have to be able to take them down swiftly when the last troops leave. In Bosnia and Albania we've built and taken down 23 base camps during the past four years, leaving behind only some of the gravel and asphalt.

"U.S. Army Europe draws on every engineer resource available," said Pelkey. "It is a total team effort that involves troop unit construction, contractor support, and Army Reserves to get the job done. Our Corps of Engineers civilians who volunteer to deploy with the force are proud the Army is calling on us for engineering management and technical support. They are part of an expanded role we see emerging on how the Corps supports the warfighter in contingency operations. Our civilian employees have performed brilliantly in support of the Task Force Engineer."

During Task Force Guardian, North Atlantic Di-

vision (NAD) refined its regional business process by using district teaming. In earlier Balkans operations, the call went throughout the Corps for volunteers. Now NAD Commander Brig. Gen. Stephen Rhoades tasks a lead district to deploy, like New York or Baltimore. The lead district commander assembles a team who can deploy together for up to six months.

Deploying district teams improves unit cohesion and helps the Corps hit the ground running. NAD's goal is for all five of its districts to gain experience in supporting warfighters, which will enhance the Corps' rapid response capability throughout European Command.

Europe District maintains operational control. Its Operations and Readiness Office handles in-theater coordination with U.S. Army Europe and European Command. Europe District also provides intra-theater logistics and technical support to its fellow district team. If the mission settles into a long-term sustaining mission, as Bosnia now has and Kosovo is set to do next spring, Europe District sets up a field office to staff the BCCA.