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WES, Seattle are excellent communities

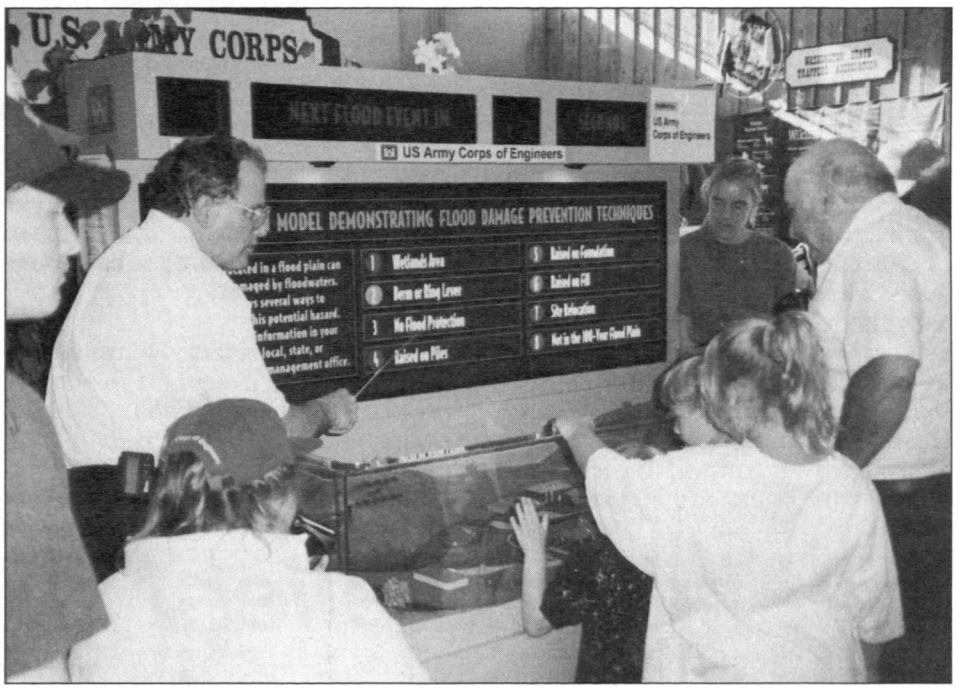
By Bernard W. Tate
HQUSACE

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

Seattle District's entry focused on such strengths as a long-standing management intern program, partnering, aligning human resources performance and training with the business plan, and productive process action teams.

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

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



At the Washington State Fair, Seattle District's Joe Weber uses a water-flow working model to show what happens to properties with no flood protection. This is an example of community outreach by one of the Corps' Communities of Excellence. (Photo courtesy of Seattle District)

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

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

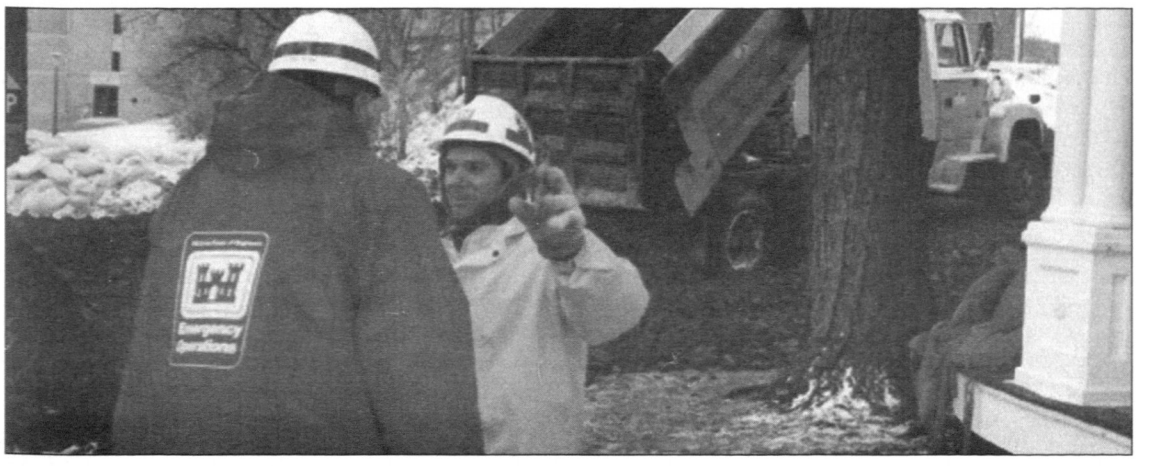
The program has six categories — large, medium and small Army installations inside and outside the continental U.S. Special Category awards are given to Army agencies not located on a traditional installation.

Winners are selected based on an entry package written by the agency, followed by a visit to the agency by an ACOE examination team. This year, 55 installation applications were reviewed and 34 received awards. The U.S. Army Armament Research, Development and Engineering Center, Picatinny Arsenal, N.J., was named the top winner.

Seattle and WES will receive their awards in a ceremony at the Pentagon on May 9. Gen. Dennis J. Reimer, Army Chief of Staff; Robert M. Walker, Assistant Secretary of the Army (Installations Logistics and Environment); and Sergeant Major of the Army Gene C. McKinney will present the awards. Portland and Huntsville will receive their honorable mention plaques from Lt. Gen. Joe N. Ballard, Chief of Engineers, in a ceremony at headquarters on May 8.

Corps battles spring floods

(Right) Dave Haumerse, Chief of St. Paul District's Construction-Operations, inspects the Minnesota Avenue Emergency Levee in Granite Falls, Minn., as the Minnesota River rises. (Left) Haumerse and Tom Eidson, construction engineer, discuss actions to protect the city from the rising river. The Corps provided technical assistance, 160,000 sandbags, three pumps, and contracts to add clay and rock to the existing advanced-measures emergency levee. Flooding was caused by melting snowpack and compounded by additional rain, snow and sleet. Corps members, contractors, and volunteers reinforced and raised the emergency levee to stay ahead of the increasing crest, which rose within 18 inches of the emergency levee's top. The Minnesota River crested in Granite Falls on April 8. (Photos courtesy of St. Paul District)



Seatbelts, airbags save four lives

By Larry N. Crump
Kansas City District

Four lives, three of them Corps of Engineers people, could have been snuffed out by a car wreck. But thanks to seatbelts and airbags, they all survived.

Ken Edgecomb was driving during the accident; Dave Hoover and Bob Smith were passengers. All are regulatory specialists with Kansas City District.

They were on an inspection trip near Lawrence, Kan., on March 7 when a woman driving a full-sized sedan rammed them from the rear at high speed.

The Corps members were in a government Jeep Cherokee, driving slower than the 55 mph speed limit. The Jeep flipped end-over-end three times, landing upside down in a ditch next to the roadway. The other vehicle was crumpled, but remained upright.

Edgecomb, Hoover and Smith were hanging upside down by their seatbelts. The driver of the sedan remained behind the wheel of her car, held in place by her seatbelt and airbag. Her speedometer was stuck in place by the impact and read 110 mph.

Yet, all four survived.

The three Corps members suffered abrasions and bruises and varying degrees of shock. Since the Jeep was rear-ended, its driver-side airbag did not deploy and Edgecomb required 12 stitches. He and Hoover were examined and treated at a nearby hospital. Smith, who was in the backseat of the Jeep, was able to crawl out. He remained in the hospital overnight for observation, then was released.

The woman, protected by her seatbelt and airbag, required no treatment.

Thanks to their seatbelts, three Corps employees survived this wreck. The Jeep was rear-ended by a car going 110 miles per hour. (Photo courtesy of Kansas City District)

"I can't say enough for seatbelts," said Edgecomb.

Hoover and Smith agree. "We would surely have been killed without them, or at least severely injured," said Hoover.

Mobile District has excellent safety record

By Tim Dugan
Mobile District

Mobile District takes safety seriously enough to celebrate. The Celebrate Safety program in Construction Division has lowered accident rates by rewarding people, offices and projects which exceed safety goals.

"We had a fantastic year," said Paul Tucker, Construction Division chief. "The team of government and contractor personnel achieved an exceptional safety record. Our accident frequency rates have decreased each year, and our goal of zero accidents is in sight."

This year, the program is off to an even better start. As of mid-year, construction workers had logged more than two million work-hours with no lost-time accidents.

Celebrate Safety objectives are to raise safety awareness, recognize superior safety efforts, develop new safety initiatives, train Corps and contractor personnel, and share lessons learned. Awards include monetary and recognition awards to Corps employees, and recognition awards to contractors. Contractors develop their own reward programs for employees who meet safety goals.

The district's safety standard is an accident frequency rate of .94 (less than one person per 100 with a lost time accident), the same as South Atlantic Division's goal.

District Engineer Col. William S. Vogel set April 4 as "Celebrate Zero Day," to honor Construction Division's half-year with no lost-time accidents in contract work.

"This puts Construction Division well on its way to a goal of zero accidents for the year. Such an accomplishment wouldn't be possible without the efforts of field office people and our contractor partners," Vogel said.

As of FY95, the district had presented 23 zero accident awards. Twelve projects joined the "million man-hour club." The Latin America Area Office in Panama was the FY96 Area Office of the Year for going a year with no lost-time accidents. Contratista Asociados was the district Safe Contractor of the Year for work on the Army Technical School in Honduras.

Celebrate Safety began in FY92. Mike Rogers, assistant chief of Construction Division, chaired the group which developed it. "Celebrate Safety started not because of a poor safety record, but because we wanted to improve an excellent record," Rogers said.

The Safety Review Board, with representatives at all levels of Construction Division, develops initiatives, selects quarterly and annual winners, disseminates information, reviews accidents, works with local safety review teams, and forms special action groups as needed.

To compete for a safety award, a project must win at the resident office level, have an accident frequency rate less than the district's goal, and all safety points required by the contract must be performed satisfactorily.

To be a *serious* contender, a project needs zero accidents, innovative programs on safety training and awareness, active involvement by subcontractors and work crews, and an employees' incentive program to involve workers in safety.

Quarterly winners are selected for small projects (less than $1 million), medium projects ($1-$5 million) and large projects (more than $5 million).

"We used to have to beat people over the head to work safely," said Jerry Abernathy, FY96 Safety Review Board chairman. "Now it's a partnership. The Corps and the contractors work together to make safety a priority."

In FY92, the Construction Division's accident rate for contractors was .97. The rate has continued below the goal in the last five years — .62 in FY93, .59 in FY94, .54 in FY95, and .67 in FY96.

"Before Celebrate Safety, Construction Division rarely recognized positive achievements in safety," said Steve Arendale, North Alabama Area Office and former Safety Review Board chairman. "We usually focused on the negative. Through Celebrate Safety, we have recognized the safety efforts of our contractors, project engineers, and field staffs. This approach has resulted in our accident frequency rates steadily declining and is having far-reaching results and savings in our safety program, as well as fostering a partnering spirit with our contractors and project engineers."

At the safety awards banquet last fall, Rusty Postlewate, Director of Engineering and Technical Services at South Atlantic Division, said, "In the last three years there've been more than 600 contracts completed in the Mobile District area, and about 96 percent of those have no lost-time accidents. This is primarily a contractor-driven success. The energy, support and positive attitude of the contractors drives it and makes it happen."

Contractors in Latin America have an aggressive safety program. Since many workers are poor, one safety incentive is to award a basket of food each month to safe workers. Some use toolbox meetings and monthly company-sponsored lunches to emphasize safety. Cash and prizes are used as incentives for safe performance. One contractor said rising insurance costs have driven contractors to develop effective safety programs.

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Simulator tests pavements at CRREL

Article by Marie Darling
Photo by Peter Keene

It's one of the biggest, heaviest vehicles in the world. It doesn't go far and it doesn't go fast, and it operates mostly *indoors*. But the Heavy Vehicle Simulator (HVS) still does an important job for the Cold Regions Research and Engineering Laboratory's (CRREL) Frost Effects Research Facility (FERF). It can condense many years of pavement testing into mere months.

The HVS, is the only testing machine of its type to be used in a controlled environment. The HVS is a 50-ton unit that's 75 feet long, 12 feet wide, and 13.5 feet high. CRREL's copy is the newest version, the Mark IV with state-of-the-art electronics and mechanical systems. It was designed and built by Dynatest of South Africa.

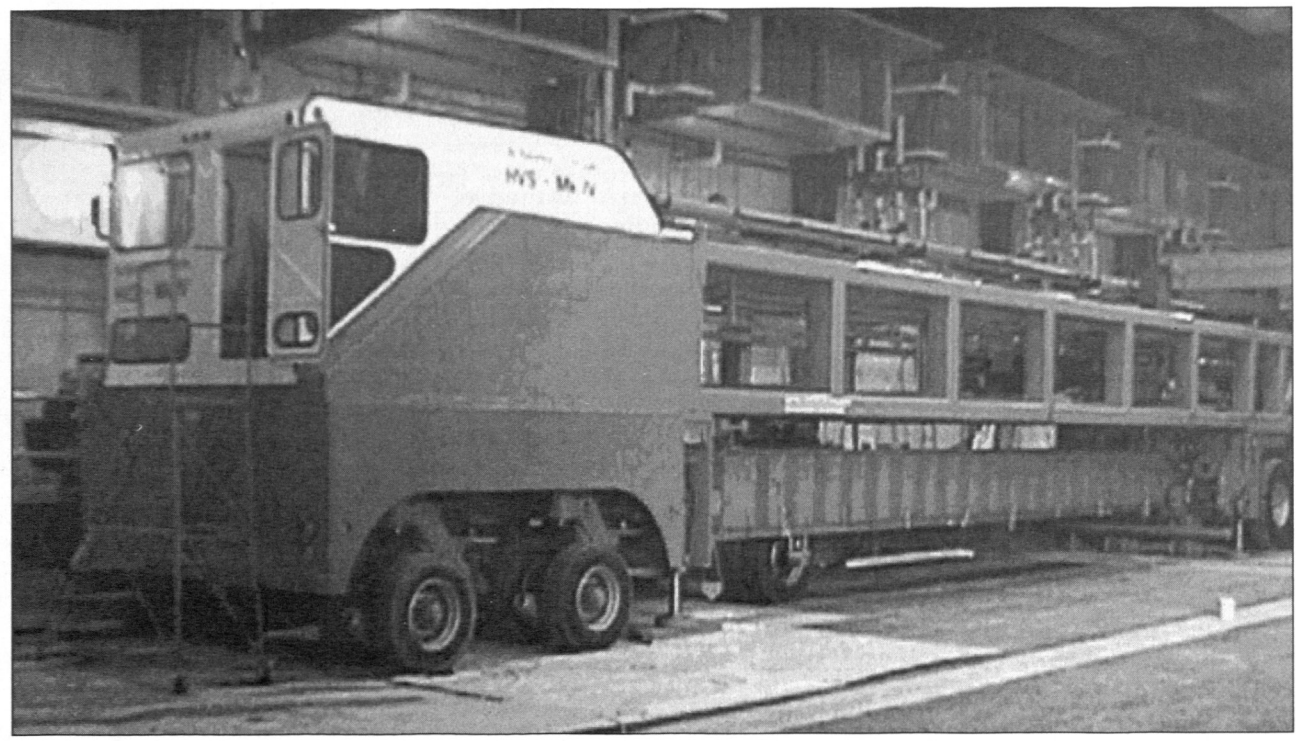
The HVS is electric powered with hydraulic motors for use inside the facility. It has a diesel engine to move into position, or from test-point to test-point.

The behemoth can simulate several different types of heavy loads. It has dual truck tires, a truck super-single tire which can be loaded up to 25,000 lbs., and a C-141 tire that can be loaded to 45,000 lbs. All tires can roll back-and-forth, and the super-single and dual tires have the extra testing advantage of being lifted so that one-way traffic can be simulated.

A total of 11,000 passes may be done in a work day at a speed of 8-10 mph. "Because of the electronic sophistication and set-up of this piece of equipment, we can apply 20 years worth of heavy traffic in four or five months' time," said Robert Eaton, pavement engineer.

The FERF, where the new simulator is housed, has four test basins that are 12 feet deep and eight that are eight feet deep separated by wood and steel bulkheads. These test sections are all 21 feet wide, about the width of a standard road lane.

The FERF is used to test the effects of cold temperatures on pavements, soils, and just about anything else that is affected by freezing weather and freeze/thaw cycles. Testing temperatures range from minus 35 degrees Fahrenheit to 120 degrees Fahrenheit.



The Heavy Vehicle Simulator, is 75 feet long and weighs 50 tons. It can compress years of wear and tear into a matter of days

Pavement engineers like Eaton know that potholes are formed by two things — moisture from thawing, and flexing that pavement experiences while under heavy vehicles like concrete trucks, logging trucks, and busses.

However, even California and Florida can have pothole problems. All it takes is moisture and flexing that exceeds the pavement's construction standards.

Currently, the FERF is doing subgrade testing — taking a look at what's happening beneath the asphalt surface to figure out what causes potholes and frost heaving. To do this, test sections containing four of the nine soil types found in the U.S. have been installed in the FERF. To simulate spring thaw, the subgrade soil water content is increased. These test sections will be trafficked with the HVS until they fail.

Right now this testing is focusing on U.S. pavements, but the the lab is working with Denmark and Finland on similar test section soils as well.

The FERF is also doing a multi-partner international cooperative demonstration project to test bituminous surfaced roads. Initial computer simulations conducted by CRREL research civil engineer Maureen Kestler for the Forest Service showed that trucks with reduced tire pressures could significantly decrease damage to thin bituminous surfaced pavements and increase pavement life.

To validate these findings in the field, several instrumented pavement test sections were built to be frozen. The HVS will apply accelerated loading to the sections during the thawing phase using high, medium and low tire pressures.

Native Americans use hi-tech navigation

By Julie T. Aitken
New Orleans District

The Chitimacha Indians lived in south-central Louisiana long before European settlement began along the Gulf of Mexico in the late 17th century. They lived along the Lafourche and Teche bayous, and in the Atchafalaya Basin along Grand Lake and Bayou Plaquemine. They traveled on foot between their villages and knew the lay of the land.

Today, the Chitimacha are unique among tribes in Louisiana. They still live on their historic homeland, mostly in their principle village at Charenton. But current knowledge of their lands is obtained by a more sophisticated method — maps based on the geographic information system (GIS).

GIS uses automated mapping and computer graphics to show the spatial relationships of information in the database. The GIS maps produced for the Chitimacha by New Orleans District combines global positioning surveys (GPS), low altitude aerial photography, and stereocompilation of the physical ground features of their reservation.

GPS uses 27 satellites to set survey points in the area to be surveyed. Aerial photographs are scanned into digital format and stereocompiled, a procedure where the three-dimensional aspects of aerial photos are traced. This information is combined in a computer to form GIS maps.

"New Orleans District provided the Chitimacha with GIS maps loaded on a CD-ROM, along with hard-copy maps with two-foot contouring and all visible features," said Dabney Wallace, chief of the Photo Team in Drafting Branch. "And we're creating a database with attributions of the physical features that have been stereocompiled."

Dabney said the program's database is a repository of information on geographic features such as earth layers, utilities, roads, vegetation, soil types, sewerage, buildings, and property parcels.

"The Chitimacha can add attributes to the information provided by the maps," said Paul Varnado, lead cartographic technician. "This could include residential addresses and street names for 911, property owners and property value for tax assessments, sewer line sizes, and gas line pressures. The possibilities are endless."

Brian Headley, the Chitimacha's economic development planner, is depending on the information system to solve multiple problems. "GIS has given us the tools to better plan the reservation's residential, commercial, historical and cultural development," said Headley.

The district's assistance to the Chitimacha springs from a new federal initiative to provide flood plain management service and planning assistance to the states. These initiatives have a direct impact on water resource concerns, according to Mark Wingate, study manager.

"Water supply, flood damages and environmental issues can be addressed through these programs," Wingate said. "They enable us to intensify our support to the states and to Native American tribes as their roles and responsibilities in land management increase."

Like the Chitimacha, the towns of Hammond, Pontchatoula, and St. Gabriel, and East Baton Rouge and Plaquemines parishes, approached the Corps requesting water resource mapping. They received aerial photography, survey information, and scanned photography.

"GIS is a beneficial planning tool," said Wingate. "Information is easily accessible between departments in the same city, parish or tribe. Any modification, such as a change to a sewer line, immediately becomes available to each department."

Partners restore old defense site

By Herb Nesmith
Los Angeles District

Partnership and close cooperation are vital to cleaning up the Salton Sea Test Base (an unused, slated-to-close defense site in California), and restoring it to public use.

It seems *everyone* wants to get in the act. The Navy owns the base and the Corps of Engineers is helping clean it up. Then there's the Environmental Protection Agency, the California EPA, the Federal Bureau of Reclamation, Bureau of Land Management, Fish and Wildlife Service, 13 Native American tribes, plus other groups and the public.

All have separate and diverse interests, but all are working together successfully.

The Salton Sea Test Base is in the desert at the far southeast corner of California. The large salt-water lake is about 235 feet below sea level. Part of it is now a state recreation area with camping, boating, and swimming.

The base covers almost 8,000 acres of land, and more than 13,600 acres of water. It was established in 1942 for World War II seaplane operations. Later, the Atomic Energy Commission renovated and expanded it for aerodynamic testing of weapons-delivery vehicles.

With advances in irrigation, agriculture developed near the base, and new communities sprang up. Military activities were no longer compatible with the area.

By the mid-1970s, all operations had moved to other facilities and the base was, in effect, abandoned. But the Navy kept the title and the military continued to use it for training into the 1980s. Some exercises incorporated live ordnance, causing extensive damage to base facilities.

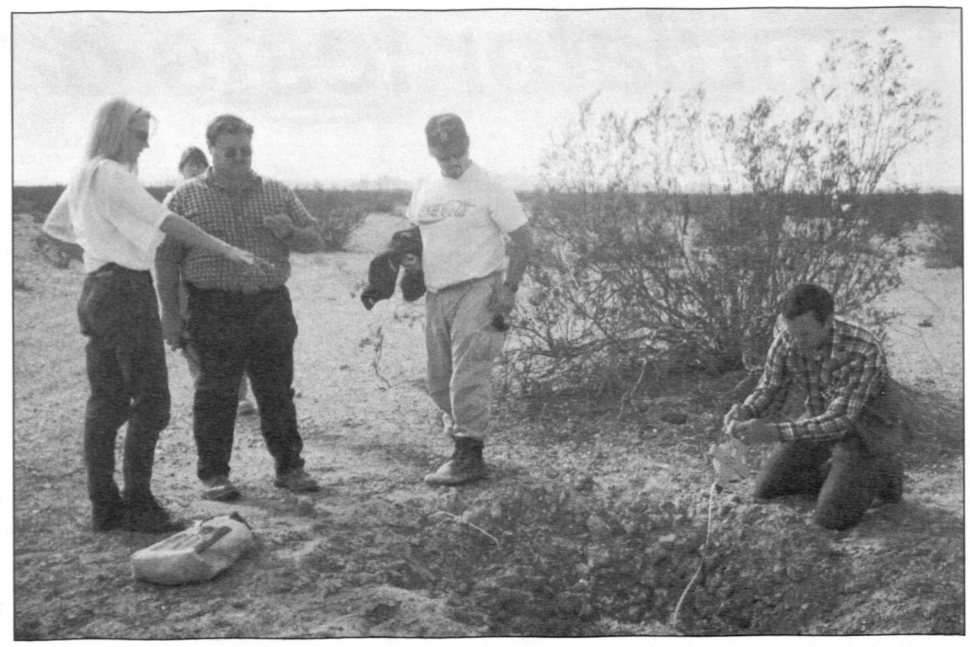
In July, 1993, President Bill Clinton announced his Five-Part Plan to help installations and nearby communities affected by Base Realignment and Closure legislation dispose of military property and stimulate economic recovery. It includes the Fast Track Cleanup Program, and the Department of Defense (DoD), the EPA, and the states concerned must create a partnership to implement it.

And implementing it they are at the Salton Sea Test Base. The Installation Restoration Program has been under way for about 3.5 years, and the public and many agencies have actively participated in the cleanup and closure processes.

Along with installation restoration are two other issues the Navy must address. One is locating and removing unexploded ordnance. The other is handling sensitive resources — Native American cultural artifacts and animal species of special concern. To complicate matters, one aspect cannot be completed before the other.

But the Fast Track Cleanup allows for creative decision-making. "Because of the Army's extensive experience, the Navy transferred the task of ordnance detection and removal to the Corps," said Trudy Knutson, L.A. District's current project manager. "The Corps put together a team to meet the Navy's needs."

Greg Boghossian, the district's original project manager, organized the team with the best people he could find. They came from Los Angeles, the geographic district; Huntsville, the ordnance experts; and Rock Island, the archive search specialists. The Rock Island team consulted records and the base's history for hints of what investigators might find.



Corps biologist John Mouer measures an old bomb crater to evaluate its impact on the environment. Left-to-right are Sandy Vissman, a biologist with the U.S. Fish and Wildlife Service; John Walker, an L.A. District safety specialist; and a Corps contractor. (Photo courtesy of L.A. District)

The Navy, the Corps, and contractors met often in planning and team-building sessions to coordinate the work. The Corps reshuffled its preferred schedule so it could clear unexploded ordnance (UXO) before the Navy's cultural resources contractor investigates the sites.

The rescheduling has saved time and money by eliminating unneeded oversight and using field team members in multi-disciplinary roles. This will help both the Army and the Navy to meet their identical targeted completion dates.

As the Corps removes UXO, the Navy proceeds with its cultural resources survey, working with archaeological, biological, and Native American representatives.

"Each has agreed on their roles, and works hard at accommodating the goal of working together in a cooperative manner," said Knutson. "Daily field meetings are conducted by one of the two L.A. District UXO safety specialists, to ensure coordination and help the project continue to run smoothly." Telephone and electronic mail are also used to further coordinate efforts.

"Feedback from the interacting parties has been glowing," Knutson said. "One Navy consultant said about the Corps' contractor performing the UXO work, 'I cannot say enough good about them! They are professionals, they respect our concerns and they follow all requirements.'"

Thanks to total teamwork, the Salton Sea Test Base project will be formally transferred as scheduled to the Bureau of Land Management for reuse by the community.

L.A. District erects floodwall for Pacific town

Article and Photo
By Fred-Otto Egeler
Los Angeles District

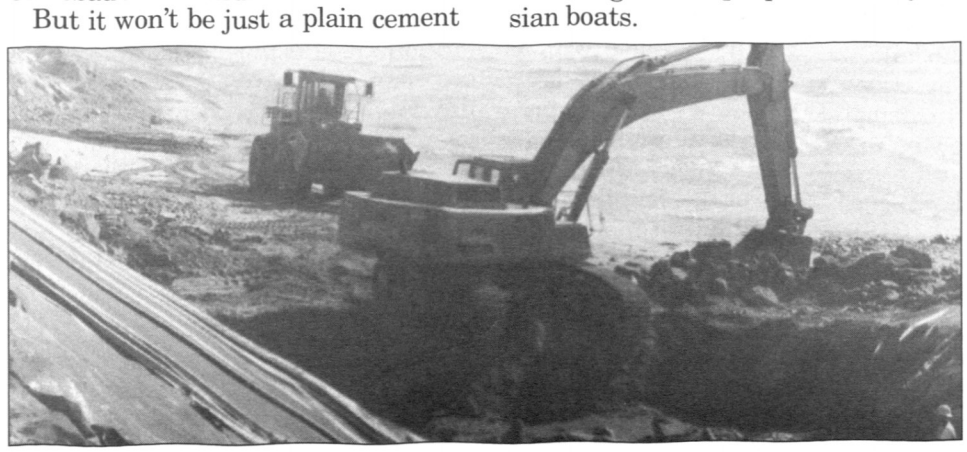
It may not be the biggest or most expensive construction project in the Army Corps of Engineers, but to the people of Carlsbad, Calif., a small city on the Pacific coast, it's the most important project in the world. A Los Angeles District contractor broke ground Oct. 9 on the $4.1 million Carlsbad Shore Protection Project.

The project is a 3.5-foot-high seawall of steel sheetpile, concrete, and rock revetment along 3,500 feet of beach. It will protect the roadway and the Aqual Hedionda Lagoon, and is more than 50 percent complete.

"We're working on the embankment right now, even though it's Saturday," said Terry Eckenswiler, project manager for REZA General Construction, Inc. "We have to get in here at low tide so that we can make the needed repairs."

The seawall is being built to help prevent beach erosion and damage to Carlsbad Boulevard.

But it won't be just a plain cement slab running 2,500 feet along the beach. It also won't look like the original design, which would have depicted ocean-themed designs including native people and Polynesian boats.



A Corps contractor works on the stone revetment. Sheets of geotextile material were laid across the embankment to prevent erosion. It will be covered with rock, or armored with three-ton stone.

A sample of the seawall design was placed in the city library for citizen review. But residents balked at the idea because it did not reflect Carlsbad and its beaches. So Raul Guerrero, who did the earlier design, came up with a new one that depicts fish and waves. There will also be some colored tile inserts placed in the wall to enhance the theme.

"We spend a lot of time at the beach and I think the seawall will help keep the sand in place," said a beach-goer named connie. "My kids enjoy playing here and it gives me a chance to get together with other mothers and get a tan at the same time."

The project is cost-shared by the federal government, the California Department of Boating and Waterways and Carlsbad. The art portion of the project is costing the city an additional $30,000.

Levee patrol is hard work, sheer terror

During a flood, one of the U.S. Army Corps of Engineers' most important jobs is levee patrol. Like many tasks affiliated with the military, levee patrol is hours of routine outdoors in the rain and mud, punctuated by moments of sheer terror.

Several Corps people learned that on April 4-5 when eight-to-13 inches of rain fell on the Bossier City area in northwest Louisiana. The federally-built levee along Red Chute Bayou was overtopped and in danger of failing. Residents of several subdivisions behind the levee watched while the local levee board, the Corps of Engineers, and other parish officials worked to keep the levee from crevassing.

They had reason to worry.

"The levee is designed to provide protection from a 25-year event flood," said Charlie McKinnie, a hydraulic engineer in Vicksburg District. "That means, in theory, the area has a four percent chance in any given year of receiving enough rain to overtop the levee."

After the levee overtopped in 1991, the Corps conducted a study to evaluate raising it to the 100-year level. The study concluded that area damage did not justify the cost.

"There had been water in some of the streets and a lot of yards, but very few of the homes had water in them," McKinnie said. "In 1991, local officials and the Corps were able to flood-fight the situation."

Levee patrolman V.J. Fletch walks an overtopped area of the Red Chute Levee to make sure the levee is secure. (Photo courtsey of Vicksburg District)

That was cold comfort in the dead of night when men dressed in lifejackets and rubber boots, armed with only flashlights, backed a boat trailer into the flood waters of Red Chute Bayou. The levee had overtopped, and they were going out to find the spot.

The current pinned their skiff against the piers and railing of a bridge already impassable because of the rising flood. The men secured the bow of the boat to the bridge guardrail while the operator throttled full ahead, forcing the stern upstream and releasing them. They then reversed the engine and began backing the boat upstream.

"Heading up Red Chute Bayou, which none of the crew had previously navigated, was scary," said Corky Corkern, the crew foreman. "Not only was it dark, but we knew the levee was overtopping and we didn't know if it had crevassed. We didn't know how many trees had washed off into the creek, or what other obstacles lay in the way. This was bad enough without factoring in the displaced fire ants, snakes, alligators and other wildlife that could be out there."

That was just one part of the Corps' response to the flood on Red Chute Bayou. Operations personnel from the local area and district offices were on 24-hour levee patrol. A Corps gage and discharge team gathered data on water velocity, depths and other flow data. A Corps hydraulics team set highwater marks for future reference.

One of the most-asked questions by area residents was, "What if the levee breaks?"

"The levee *did* crevasse in 1991," McKinnie said. "However, even then the water didn't cut the levee all the way to the base. That levee is made of good clay material and it's holding together well."

In 1991, the levee crevasse occurred far enough upstream for most of the flow to channel across farm fields and into the Flat River without loss of life or property. The water backed up into a slough that is now a lake. The levee board closed the open culvert near the junction of Racetrack Bayou and Willow Chute and positioned two pumps to pump water back into Red Chute Bayou to protect the area.

This year, with the Corps pulling 24-hour levee patrol and the levee board repairing problems, there would be several hours notice if a levee problem were developing. The levee *did* overtop, but did not crevasse. The levee board again sandbagged seepage areas. Just like in 1991, two pumps were positioned in the same place to pump water back into Red Chute Bayou.

"The water overtopped the levee, but it's made from good clay and it had good clover cover," said Ken Bryan, sector commander from the Shreveport Area Office. "But we aren't out of the woods yet. The levees are saturated so, like all earthen levees, they're at risk in the event of continued heavy rainfall."

Although this is normal terminology for flood fighters, area residents may find it disconcerting. In layman's terms, it means residents must wait and see what the weather brings. "Right now, the situation looks good," Bryan said. "The levees can handle a lot of water."

So, as residents wait to see what the next storm brings, the Corps gathers stream flow information, sets highwater marks, and patrols levees.

(Vicksburg District Public Affairs Office release.)

Data system tracks traffic

By Denise Tyler
Rock Island District

River traffic gets busier each year. People who earn a living using the rivers need accurate data, so Rock Island District has updated a system that records important information on its most active rivers.

A recording system called OMNI (Operations and Maintenance Navigation Information) was introduced to the district in 1980. It captures all data pertaining to vessels and commodities navigation at the various lock sites on the Mississippi and Illinois rivers.

The system also collects and stores daily hydraulic data, weather conditions, and equipment conditions at each lock site. Vessel name and number, number of barges and commodities being hauled, and pool and tail water levels are included in the stored data.

To take advantage of improved technology, a Rock Island District team converted OMNI to run on personal computers in a Windows environment. This revised version is called WinOMNI. The conversion integrates the familiar OMNI record-keeping system into a user-friendly Windows format, allowing more productivity. WinOMNI stores virtually the same information as its predecessor.

The team who created the system is from the Integration and Implementation Branch of the Information Management (IM) Office. Chicago, St. Paul and St. Louis districts have also adopted WinOMNI. Other Corps divisions have expressed interest in the system, and efforts are underway to make the application available to other Corps sites.

"We did a lot of writing and testing to fine-tune the system," said Laurel Irvine, a team member. "We wanted to give users a friendly application."

Irvin said that excellent rapport developed between her office and lock employees.

"The input from the locks was invaluable," she said. "When we were in the test mode, they gave us excellent feedback and shared ideas for improvements. They helped us design some new reports. They were wonderful to work with."

Jim Dixon, assistant lockmaster at Lock and Dam 15 on the Mississippi River, echoed Irvin's opinion. "IM was good at listening to our needs," he said. "Nobody dictated to us or gave us the feeling that 'this is how it's going to be.'"

"WinOMNI is a unique application in the Corps of Engineers," said Irvine. "It is a centralized ORACLE database, with all locks tying into one server in Information Management, where the database is stored and maintained. A shared database provides real-time information to its users."

WinOMNI uses tool-bars at the top of screens, drop-down menus, and graphics within tool-bars for easy use and familiarity between computer applications. The data is used by many employees in Rock Island District, including Engineering Division's Hydraulics Branch and several offices in Operations Division. The information is also scrutinized by Corps headquarters.

"With all the checks and balances in WinOMNI and the temporary save feature, it's pretty hard to enter bad information," said Dixon. "In the past, it used to take me the better part of a day to fix what headquarters would send back on the monthly correction sheet. I had just three errors for December, a big decline."

Corps employees are not the only ones using WinOMNI. Some of the information is transferred to different Internet sites accessed on Rock Island District's homepage, which are viewed by barge companies, commodities enterprises, and even grocery stores.

"Towboats need groceries to feed the crew,' said Irvin. "Well, it seems there's a grocery store farther down the Mississippi River that checks our Internet homepage to find out vessel queues. They plan their grocery deliveries based on when the vessel-customer nears town. Now, *that's* customer service!"

Flock of the Bay:

Dredged material island restores endangered birds

By Tim Dugan
Mobile District

There's an island in Mobile Bay that was not put there by nature. It's a dredged material disposal site called Gaillard Island. It has become an environmental showcase, home to thousands of birds, particularly brown pelicans, a once-endangered species with no recorded nesting in Alabama dating back to 1900.

During planning for the Theodore Ship Channel, a heated debate ensued over depositing dredged material in Mobile Bay and creating a disposal island. It was controversial from environmental and engineering aspects. Many engineers thought an island of dredged material would not hold together in open water. Environmentalists and fishermen were concerned about the impact to the bay.

But after many years and studies, construction began in 1979. Initial dredging was completed in 1981 using 31 million cubic yards of material, and the island now shows the beneficial use of dredged material, according to Susan Rees of the Coastal Environmental Section.

Although the island is still an active disposal area, it is one of the most significant coastal nesting areas of brown pelicans and other birds between Texas and Florida.

Soon after the island rose above water, shorebirds began using its favorable habitat and isolation. In June 1983, four brown pelican nests were discovered. By 1985, there were 119 brown pelican nests, and 16,000 other seabird nests. From that, the pelican population has grown to more than 5,000 nesting pairs. The island has gained national attention as a positive compromise between industrial growth and environmental protection.

The island has gained national attention as a positive compromise between industrial growth and environmental protection.

Gaillard Island is a 1,300 acre triangle about three miles east of Theodore Industrial Complex and 11 miles south of Mobile, Ala. Each side is about one mile long. It's named for Dr. Wilson M. Gaillard, a Mobile dentist, environmentalist, and supporter of industrial growth.

During the study period, a model of the channel and island was built at the Waterways Experiment Station (WES) in Vicksburg, Miss. The model reproduced the bay's hydrography and topography, tides, currents, and salinity. Ten disposal site configurations were tested and results showed that building the Theodore Channel without the island would raise salinity levels. With the island, there was little change in either salinity or water currents.

"We looked at the plan that least impacted the bay," said Jim Baxter, former assistant chief of Operations Division. "We came up with this triangular design. The biggest challenge was gaining acceptance that the island could be built. It was a new technique and there were a lot of skeptics who felt the material was not suitable.

"We also had environmental concerns about the island," Baxter said. "We felt it could have a lot of benefits, but little did we know that we'd bring the brown pelican back. It's gained a lot of recognition. I've taken visitors from as far away as Australia to look at it. They want to observe how we built it and look at the island's development."

"Although the project was our second planned beneficial use of coastal dredged material, many staff members didn't believe an island was possible due to the poor foundation conditions and the characteristics of the dredged material," said Hugh McClellan, chief of Environment and Resources Branch.

Project critics, including some engineers, said the material would wash away or create a muddy mess in the bay. Environmentalists and fishing groups opposed most plans. The district looked at many designs in light of environmental considerations.

"There were a lot of Doubting Thomases that we couldn't pull it off," said Ted Love, formerly of Engineering Division. "I remember we did a test section. We dredged about a quarter of a million cubic yards where the channel would be." They pumped until a desk-sized mound broke the surface, but in days it washed away.

"That test caused some concern," Love said. "It reinforced those guys who said it never could be done."

But the test encouraged others. Harvey Blakeney, now retired from Soil Design, and some of his geotechnical people thought it could be done, with the proper design.

Designers studied other dredge disposal projects, but found this one unique. "Ours presented more challenges because of that soft foundation," said Wayne Odom, former chief of Hydrology and Hydraulics Branch. The contractor excavated the landcut portion of the turning basin, put the material on barges and transported it to the site. This harder material helped form a solid foundation.

"We worked on it even after construction with stabilizing slopes and slope protection, rip-rap, and groins," said Odom.

Birds and wetlands have been successful on the island. In fact, in the early stages birds were a problem.

"When we started building the island we ran into concerns about what to do about so many birds nesting in the area while we were trying to complete construction," said Paul Bradley, Operations Division Navigation Section chief. "We had to develop a management plan to make it compatible for both bird nesting and our construction."

With WES assistance, the district also developed a marsh establishment plan that included state-of-the-art techniques. "We developed techniques that are now used nationwide," Bradley said. These included floating tire breakwaters to protect from wave action so root systems could get established. The marsh was needed to help stabilize the island and as an environmentally beneficial feature.

"The thing was touted as an environmental disaster by environmentalists and it turned out to be an environmental boon," Bradley said. "It's really a success."

The Alabama State Docks is responsible for the island now, but the Corps has the mission to maintain the ship channel and dispose of dredged material there.

"Our mission is management of dredged material on the island and compliance with the bird management plan," Rees said. "We can't negatively impact the birds in any way."

The Corps manages disposal to protect nesting birds. Five pipeline corridors on the island's southern end are used to deposit dredged material during nesting season. Outside that, any area on the island can be accessed.

Dredged material is poured into the diked area and settles sloping toward the weir box in the north corner. While the material settles, the weir box allows clean water to drain into the bay.

The island is remote, which minimizes visits by people and predators. "The island is successful because a lot of people can't get to it easily," Rees said. "The bird population has greatly benefited from this situation."

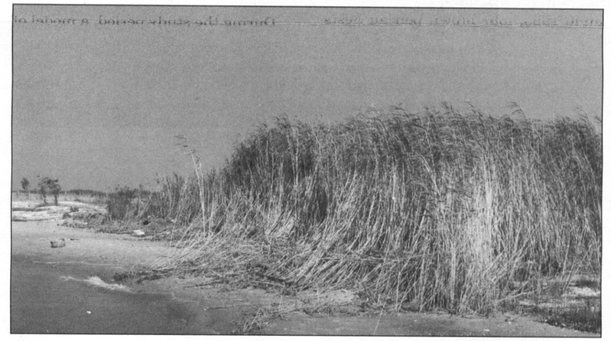
The island has become a haven for more than 22 species of birds, including gulls, terns, herons, egrets, and black skimmers. "This island is the only breeding ground for the brown pelican in Alabama," said Paul Warren, assistant chief of the Physical Support Branch. "In fact, it had a lot to do with taking the brown pelican off the endangered species list."

State officials have helped protect and monitor the island's nesting birds since 1985. Since then, more than 4,600 pelicans have fledged from the island.

"It shows that the environmental and industrial communities can work together and have development as well as protect the environment," Rees said.

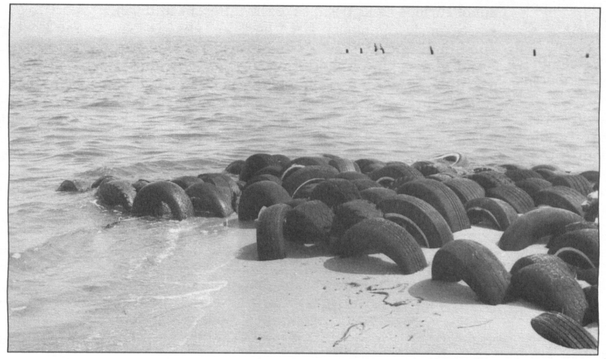
"The island is successful because a lot of people can't get to it easily. The bird population has greatly benefited."

Brown pelicans were an endangered species in Alabama before the construction of Gaillard Island. (Photo by Adrien Lamarre)



Marshes were established on Gaillard Island to stabilize the land. (Photo by Adrien Lamarre)

Studies indicated that a triangle would be the ideal shape for Gaillard Island. (Photo by George Edwards)



Marsh establishment efforts included using floating tire breakwaters to provide protection from wave action. (Photo by Tim Dugan)

Artist uses Corps as subject

Article by Nicole Barnes
Photo by Marti Hendrix
HQUSACE

Jan Fitzgerald takes a break from the current painting she is doing for the Corps of Engineers.

Jan Fitzgerald is a famous artist you've never heard of. Her art has been admired by thousands in the Pentagon, Germany, Congress, and the Executive Office at Corps headquarters, but the only credit she gets is the small "J. Fitzgerald" in one corner of her canvases.

Fitzgerald, a graphic designer for the Humphreys Engineer Center and Support Activity, provides graphic support for headquarters. But between assignments she creates artwork for the Corps, recording the Corps' wide range of missions.

"There are a lot of different tastes in art and I hope to create paintings which cover a variety of them," said Fitzgerald.

Currently, she has two pieces displayed in the Executive Office and plans to create more. One piece is titled "Castle" and was adapted from the first existing draft of the Corps' castle insignia. The other is a painting of Fort McNair in the Military District of Washington, which was created from a black-and-white photo taken about 1950.

Those pieces "are significant because they got the ball rolling (for me) to create more paintings for the Executive Office," Fitzgerald said. "The paintings brought attention to the fact that there was someone at headquarters with this ability."

Fitzgerald is currently working on a piece which she is painting from a photo by Jonas Jordan, a photographer at the Savannah District. The painting depicts the clean-up efforts of Corps employees after Hurricane Andrew devastated Homestead, Fla., in 1993.

Headquarters employees are not the only ones who have enjoyed Fitzgerald's art. Her work is displayed in the Pentagon as part of a permanent exhibit, the *History of Women in the Army.* She also recently had two pieces displayed in the Cannon House (of Representatives) Office Building as part of a temporary exhibit on the same subject. Those pieces were created in 1979 when Fitzgerald was a member of the Army Artist team through the U.S. Army Center of Military History.

Fitzgerald realized in the fourth grade that she wanted to be an artist after her picture of a fire engine received a gold star and was posted on the bulletin board. She had no art classes in high school but, with the support of her father, a sign painter, and her mother, who helped research art schools, she found her way into college.

After graduating, Fitzgerald received a Bachelor of Fine Arts degree from Columbus College of Art and Design in Columbus, Ohio.

Faced with a pile of education loans, Fitzgerald enlisted in the Army. While stationed in Heidelberg, Germany, she was tasked with painting a mural 17 feet long and six feet high for the reception center. It featured several of Fitzgerald's favorite castles in Germany, with a background of mountains, hills and rivers. It was the first thing new troops saw when they arrived in Germany and was painted "to make them feel welcome," Fitzgerald said.

All the experience and successful displays have given Fitzgerald a simple rule-of-thumb. "Never be satisfied with the comment, 'that's good enough,'" is the advice she would give aspiring artists.

Fitzgerald is a member of the Art League in Alexandria, Va., although she confesses she hasn't yet made good use of it. "I plan to get very involved in that direction as I approach retirement," she said.

Australian soldier learns engineering from Corps

By Herb Nesmith
Los Angeles District

Who was the tall stranger with the slouch hat and intriguing accent in Los Angeles District? Lt. Toby Garafillis of the Royal Australian Engineers. Garafillis is an engineering student at the Australian Defence Force (ADF) Academy in Canberra and was in the U.S. to fulfill a requirement.

He first studied three years at the academy, then for a year at the Royal Military College. Garafillis, now a lieutenant in the ADF, then had a fourth year to complete at the academy. But first he had to serve seven weeks with an engineering organization of his choice, civilian or military, anywhere in the world.

Garafillis chose the Army Corps of Engineers, but he came to Los Angeles District by a round-about path. Col. Larry Davis, the district engineer, had previously been assigned to the Engineer School at Fort Leonard Wood, Mo. There he was acquainted with Lt. Col. Philip White, the Australian Engineer Liaison Officer.

Davis had once been an exchange officer in Australia and, when he learned that five ADF engineers were coming to the Corps, he told White, "I'll take one." (Two others went to Jacksonville District and two to the Waterways Experiment Station.)

When Garafillis arrived in L.A. District, "I drew a lot of curious looks because of the different uniform, particularly the slouch hat," he said. His six-foot-four-inch height also attracted a glance or two. "And in speaking I had to repeat things because of the difference in Australian and American accents."

But Garagillis said that everybody made him feel welcome and, as time passed and he began work, he blended right in. He got a lot of support from Davis and the deputy district engineer, Lt. Col. Wylie Bearup. Capt. Chris Cottingame was his sponsor.

Garafillis found some differences between the engineers in the Australian and U.S. armies, notably that the ADF has no equivalent of the Corps of Engineers. "There are no Corps districts in Australia; it's purely military," Garafillis said.

Another difference is in measurements. Australia, like most of the rest of the world, uses the metric system. Inches, feet and miles are a difficult concept. "For example, I cannot visualize how long 16 inches is," Garafillis said.

How about cultural differences? Garafillis found that most Americans don't know much about Australia, but want to learn more. "They think it's an intriguing country."

How did Garafillis feel about how Australians are portrayed in the American media, like commercials for Fosters beer and Outback Steakhouses? "I think the Fosters beer advertising is funny," he said. "And in the Australian outback there are no steakhouses by that name, just a pub and gas station every 500 kilometers (about 310 miles)."

Garafillis also found it interesting that Australia and the continental U.S. are about the same size, but the U.S. has more cars than Australia has people. (The population of Australia is around 18 million.)

Garafillis said he's glad he came here, even though he had to pay the transportation costs. He and the other four young Australian lieutenants spent three weeks touring the U.S. before reporting to their assignments. Among other things, they were in Times Square on New Year's Eve, toured a Navy aircraft carrier at Norfolk, Va., and skied at Breckenridge, Colo. They also visited Boston, Washington, D.C., Denver, Las Vegas, San Francisco, Monterey, Calif., and Tijuana, Mexico.

On his way back to Australia, Garafillis will spend some time at Lake Tahoe.

The Last Great Race

Alaska engineer runs famed Iditarod

By Pat Richardson
Alaska District

It's one of the toughest races in the world. The Iditarod Sled Dog Race is a grueling test of man and animal through 1,049 miles of the Alaskan interior and along the Bering Sea coast.

But Jerry Raychel of Alaska District felt optimistic when he called "hike" to his 16 eager young dogs at the starting line in Anchorage. The 47-year old civil engineer is a veteran of four previous Iditarods and he felt sure he could cross the finish line in Nome in the top 20.

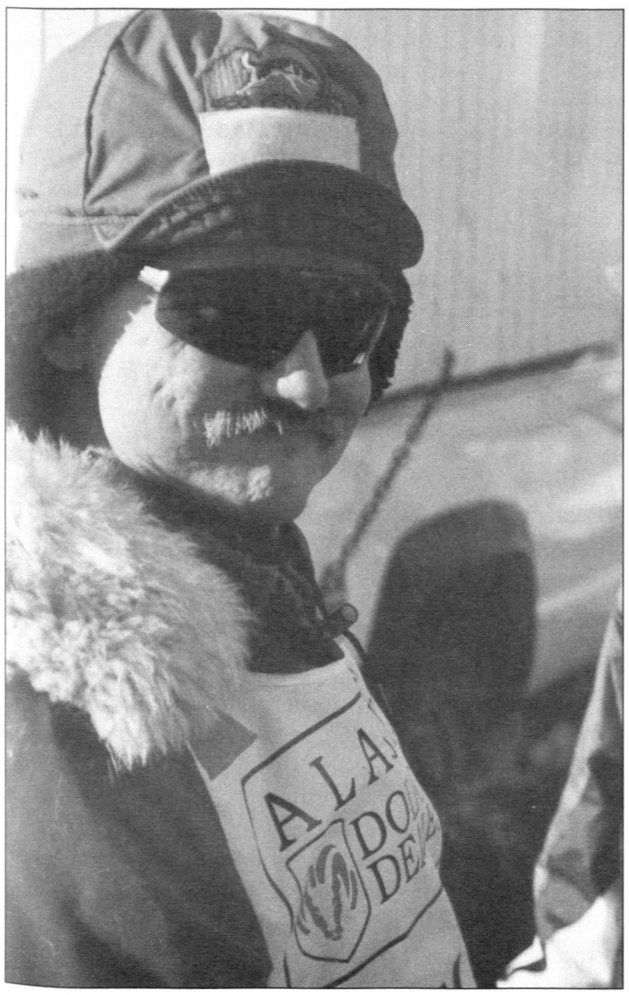
His team was young, but not too young. One dog was eight years old and had gone to Nome in his 1991 team. The rookies included one five-year-old, eight four-year-olds, four three-year olds, and two two-year olds.

"It was the best dog team I ever had," said Raychel, a 23-year veteran of the Corps. "They had athletic ability, endurance, and they worked hard all the time. In 1,700 miles of training, we had only one dog go lame."

Raychel would need a good team, because only the best mushers (dogsled drivers) and dogs tackle the Iditarod.

The Iditarod National Historic Trail began as a mail and supply route from coastal towns to interior mining camps and Alaska's west coast communities. Dog teams carried mail and supplies in and brought gold out. The trail gained fame in 1925 when mushers used part of it to take serum to Nome during a diphtheria epidemic.

1997 is the 25th anniversary of the Iditarod Dog Sled Race. Mushers draw lots for their starting positions. Raychel started 51st in a field of 53 mushers. At Skwentna, 149 miles from Anchorage, he had moved up to 33rd place. After another 325 miles of trail, he slid into Ophir in 24th place.



Jerry Raychel has run five Iditarod Sled Dog Races. (Photo by James Melnyk)

The weather was good. Temperatures ranging from 20 below to 20 above were perfect for dog sledding. Raychel, chief of the district's Chief of Soils and Geology Section, completed the race in 1984, 1986, 1988, and 1991. All those races had much worse weather than this year.

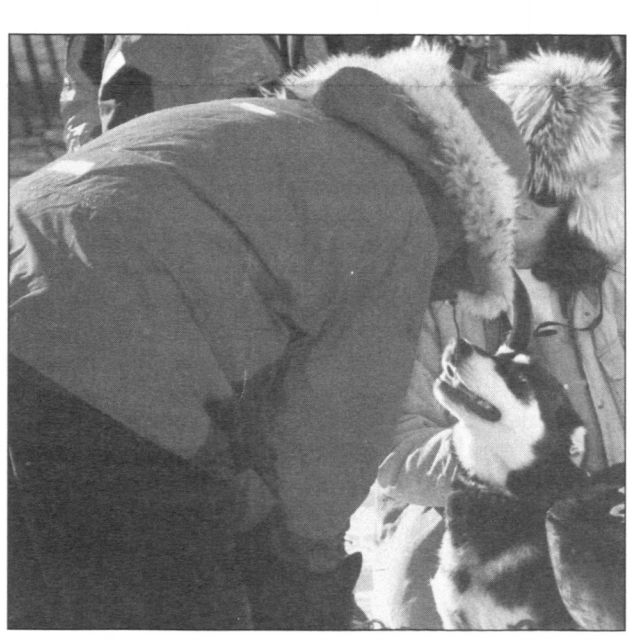
"The weather was tough in 1991," Raychel said. "There were blizzards and I spent a lot of time sitting in checkpoints and in the sled bag between checkpoints waiting for whiteouts to clear up."

This year he enjoyed the clear nights.

"The northern lights were out, the comet was out," Raychel said. "At one point, the comet was ringed with northern lights. It was a nice trip."

Raychel took his mandatory 24-hour layover at Nikolai, the first Native American village on the trail. He had dropped three dogs at different checkpoints along the trail, but that was normal for the Iditarod. He still had 13 dogs and they were doing well. "Everyone was eating and they were leaving the checkpoints happy," Raychel said. "It went really good until Ophir."

He left Ophir in the evening of March 6 and the next 90 miles took a heavy toll on his team. The trail between Ophir and Iditarod had been warm and slushy early in the race when snowmobiles had broken trail for the mushers. By the time Raychel and his team arrived, the slush and snowmobile tracks had frozen into a hard, irregular surface.



Jerry Raychel spends a moment with Boy, his veteran husky. (Photo by James Melnyk)

"I tried to hold them back, but they were eager to run and I couldn't get them slowed enough to keep them from getting sore," said Raychel.

The impact of a hard-packed trail hits dogs in their shoulders. At Iditarod, 564 miles from Anchorage, Raychel dropped three dogs because of sore shoulders and noticed that another one showed signs of stiffness. At Shageluk, 65 miles later, he took his mandatory eight-hour layover. He pushed on with 10 dogs, arriving in Grayling, a village 672 miles from Anchorage, at 8:45 p.m. on March 8.

Raychel dropped two more dogs with shoulder problems at Grayling. He was down to eight dogs and half of them had stiff shoulders. He rested a day-and-a-half, hoping they would rebound. Twice he hooked them up to the sled and they went a short distance but turned back, telling Raychel they were not ready to finish the 489 miles to Nome. He decided to scratch (leave the race voluntarily).

"Everyone talks to me about scratching like it's a death in the family," Raychel said with a grin. "They look down and say how sorry they are that I scratched. But I wasn't that unhappy. I might have been if it was my first race, but this was a good race."

Raychel is pleased with his team's performance. They were traveling 125-130 miles a day. He compares this race to his first Iditarod.

"In 1984 we ran the 93 miles from Rohn to Nikolai in 29 hours," Raychel said. "This time we did it in 12. We were close to the top 20 up to the point when we hit the wall. In six days they went more than 700 miles, and one of those days was a day of rest."

When Raychel scratched, his wife and daughter were already in Nome to meet him at the finish line. He flew home with his dogs and sled, and the next day he took a plane to Nome.

Martin Buser won the race, crossing the finish line in Nome on March 11 with a time of nine days, eight hours, and 30 minutes. Raychel's best finishing position was 25th in the 1988 race, when he finished in 14 days, nine hours, 17 minutes.

Raychel's dogs' stiffness cleared up in a short time and they are back in fine form, but he doesn't know if he will enter the Iditarod again.

"It's tough to compete if you aren't doing it full time," Raychel said. "The winners are full-time with sponsorships and 'way more dogs than I can keep. But that doesn't make it less fun."

But Raychel plans to continue mushing dogs. "We'll do other races next year," he said. "There are a number of 200-to-300 mile races to enter."

Jerry Raychel (number 51) and his team runs on the Chester Creek Trail. Riding in his sled bag is Allison Turkington, a 10-year-old cancer patient, who rode the first seven miles courtesy of the Make-A-Wish foundation. (Photo by Pat Richardson)

Foreign students find 'mom' in U.S.

By Patricia A. Ofslager
Rock Island District

Clarice Sundeen from the Planning Division smiled as she described some misconceptions that foreigners have when visiting the U.S. The most unusual question posed to her pertained to the underground travel system the person expected to find in every American city. "Do you have subways in Moline?" The teenager who asked was surprised to find there weren't.

And how did Sundeen come to be an expert on foreign misconceptions? Her family has hosted four exchange students from different countries. Miguel from Spain and Alfred from Brazil each lived with the Sundeens for one month. The family then hosted Amelie, a girl from France, for 10 months. The Sundeens now provide a home for Mateusz, a Polish native, who will also stay for 10 months.

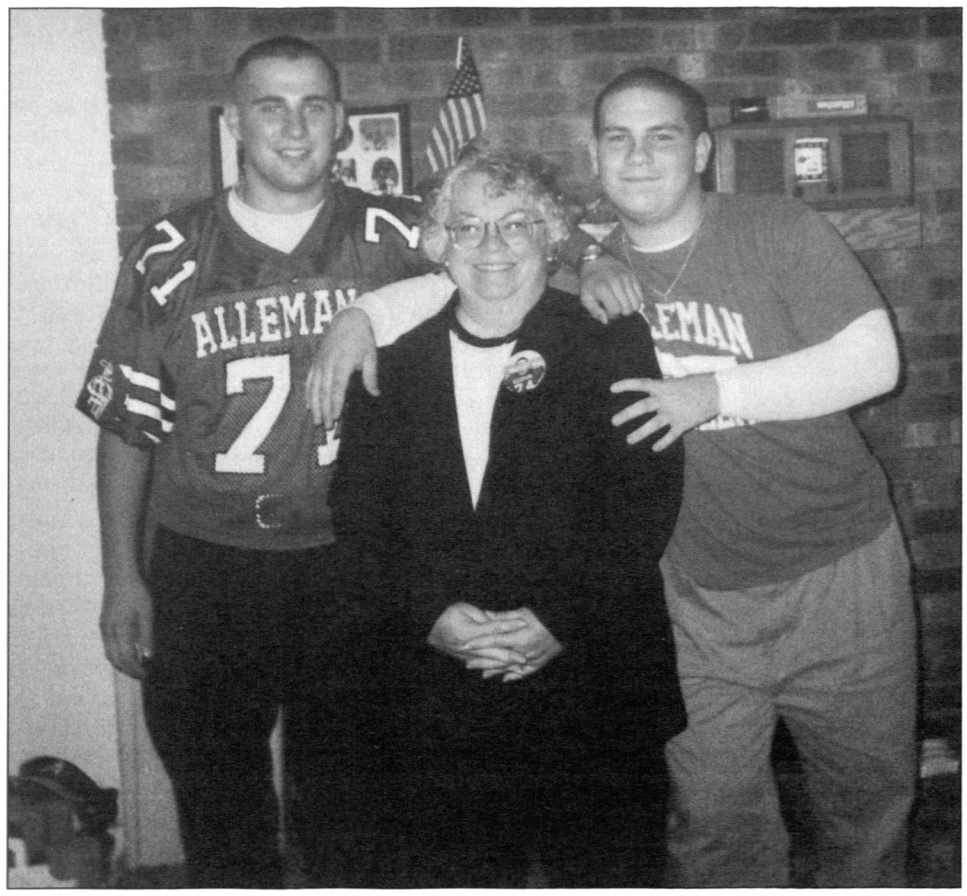
"Not only are we able to see what they think of us, but we are able to make a small effort to change any misconceptions they have of the U.S.," Sundeen said. "The kids are always very excited about learning."

Learning about lifestyles and customs of those around the world is a positive aspect of the exchange program. There is a constant exchange of ideas about religion, government, and entertainment.

"Halloween was a great treat for Amelie," said Sundeen. "France doesn't celebrate a holiday quite like Halloween, and she spent many hours on her costume and make-up."

Making the student a genuine member of the family is what host families strive for. There is always a brief period of awkward adjustment as a teenager comes into a new family. But it doesn't take long for everyone to accustom themselves to new lifestyles.

Mateusz, or Matt as Sundeen's current "temporary son" likes to be called, is expected to do chores around the house like Sundeen's other children. He was not used to household chores in Poland because his family employs full-time household help. Sundeen is happy to report that he actually *likes* to do the vacuuming.



Besides being Mom to son Brad (right), Clarice Sundeen is also "mom" to foreign exchange student Mateusz from Poland for the 1996-97 school year. (Photo courtesy of Rock Island District)

Matt attends Alleman High School in Rock Island, Ill. He was thrilled to be part of the high school football tradition. After overcoming a few cultural hurdles, such as learning the rules of the game, he eventually got the hang of it. Matt has been involved in the sport of wrestling there as well.

Matt impressed Sundeen's family when he shared the Polish Christmas tradition of preparing a meal of twelve different dishes. Each dish has a special significance to the family. After dinner, bread is passed around the table and broken into bits. As each family member breaks off a piece of the loaf, they tell the others what they love about each one. The Sundeens found this tradition so moving that they plan to continue the custom every Christmas.

In order for students to be part of the foreign exchange program in America, they must have studied English for three years and be at least 15 years old. Additionally, they have to be in good academic standing and be recommended by at least one teacher.

Before entering the program, students must take courses in English, American history, and U.S. government. If those criteria are met, the qualifying individuals are interviewed by one of 20 agencies in the U.S.

Once selected into the program, students provide a biography, photograph, and a list of hobbies and interests to prospective host parents. A future host family is able to specify the sex, age, and region of the world where they would like their student to be from. Students and families are then matched up.

While Sundeen stresses that the rewards are too numerous to list, there are some requirements placed upon a family as well. A student must be furnished with his or her own bed in a separate room or in that of a same-sex sibling. Including and accepting a stranger into a family for five to 10 months takes not only commitment, but time and energy.

There is also a minimal income tax deduction of $50 per month for host families, but "it's not about receiving any reimbursement," Sundeen said.

Sundeen thoroughly enjoys the cultural exchange during her hosting experience. The sharing of American ideas is good for the foreign students, too.

"It promotes understanding," Sundeen said. "I believe this is a way of focusing on the importance of peace."

The students and their host families grow in understanding and love, but there is one sad disadvantage — the day when they have to say goodbye. During the final farewell, Sundeen surprises each of her adopted kids at the airport with a scrapbook full of memories. The special gift is a way to help them remember their stay. It also provides Sundeen some comfort.

"Each of my students leaves the country I love with a love for it, too," she said. "They have gained some knowledge and a respect that will help them promote peace."

West Pointers tackle flood control

By Herb Nesmith
Los Angeles District

Two West Point cadets working for academic credit have designed an alternative to part of a Corps dam enlargement project. Cadets Mark Hunsicker and William Watson visited Los Angeles District on Feb. 21 to brief district staff members on their study results, and their design is currently under consideration by project management.

The existing Prado Dam will be modified as part of the ongoing Santa Ana River Mainstem Flood-Control Project. Part of the work involves an addition which "will improve the dam's storage capacity and includes a large spillway system to transport water downstream," says their report.

When Maj. Scott Hamilton of the U.S. Military Academy (USMA) faculty was in the district last summer, he worked on designing retaining walls for the east and west wing walls of the spillway system's overflow intake structure.

Hamilton felt there was something not quite right with the proposed concrete gravity and cantilevered walls design. He received permission from the district to take the design back to West Point with him.

"The subject was more in my area than Scott's, so he gave it to me," said Maj. Tom Smith, assistant professor in the USMA's Department of Civil and Mechanical Engineering. "I offered it to cadets for Advanced Individual Study, which is worth three credit hours."

Hunsicker and Watson were interested and took it on. Smith was their advisor.

The object was to design two walls on the upstream side of the dam to direct water toward the intake structure. The intake regulates the raising of a gate to let water into pipes leading to the outlet works. With this system, the amount of water released from the dam can be carefully controlled.

Using Corps wall specifications and site conditions data, Hunsicker and Watson designed two reinforced-earth retaining walls. The walls would be faced with reinforced-concrete panels. "The facing panels act as a skin to hold back the mechanically-reinforced earth block," the report said.

The mechanical reinforcement of the earth is a series of the panels, with each panel attached to 42-inch metallic strips extending into the backfilled earth. The pressure of the earth holds the strips in place, which in turn hold the panels in place.

"We chose to do this, a real-world project, rather than just take another course," Watson said. "It's a project that could have an impact, not just another textbook problem with no real consequence."

"We had the opportunity to develop and present the study as an actual potential project," Hunsicker added.

Around the Corps

Support for others

Albuquerque District is expanding its support for others role with the Immigration and Naturalization Service (INS), currently performing $11 million in design and construction. The work in the INS's El Paso Service Processing Center includes construction management of two dormitories, and design and construction management of several support buildings.

The center, operated by INS's Detention and Deportation Department, houses illegal aliens who have committed felonies and are awaiting deportation to serve their sentence.

The dormitory buildings will each house 200 detainees, increasing the capacity from 50 to 450. The support buildings include a new processing center, laundry, dining hall, infirmary, and a Deportation/Executive Office of Immigration Review (EOIR) building.

Included in the contract for support buildings is an addition to the command center, which houses the security portion of the center, including alarms and closed-circuit TV.

The $2 million Deportation/EOIR building will house the courts, the offices of the judges and their clerical staff, and the deportation officers' offices and staff.

The dormitories are scheduled for completion this month. Contracts for support buildings, except for the Deportation/EOIR, was awarded to CDE Enterprises of El Paso with a 12-month construction period for $3.8 million. The contract for the Deportation/EOIR building was awarded in March.

GP-18 Career Program

Procedures for filling GS-13 positions in the Engineers and Scientists (Resources and Construction) CP-18 Career Program have changed. Effective May 1, CP-18 GS-13 positions will be filled using vacancy announcements with at least an Army-wide minimum area of consideration. This is because Army Human Resources Offices now are nearly all regionalized. With limited resources these offices will be unable to maintain referral inventories.

Army activities will publish announcements through normal distribution channels. They will also furnish copies to HQUSACE, Career Programs Operations Division, where they will be posted on the CP-18 Home Page at "www.hq.usace.army.mil/cehr/c/mainhrc.htm". Candidates who are interested in these positions will be considered when they apply directly to the Army activity with the vacancy.

Gas chromatograph

Tulsa District's environmental capabilities recently grew by acquiring a portable system which combines two widely used instruments in the environmental field.

The Chemistry and Industrial Hygiene (CIH) Section now has a Viking field portable gas chromatograph coupled with a mass spectrometer (GC/MS). Gas chromatography is the technique used to separate complex mixtures of chemicals. Mass spectroscopy serves as a detector, and identifies the chemicals based on their molecular weights.

The GC/MS is capable of analyzing soil, water, and air samples because its design allows environmental samples to be introduced through thermal desorption and direct injection, as well as purge and trap.

This instrument gives the district the ability to perform soil gas surveys, and analyze groundwater, surface water, drinking water and soil samples. The system can also run samples in accordance with Environmental Protection Agency methods for both volatile and semivolatile compounds.

Bald eagles

Last winter had the largest sighting of bald eagles ever seen in Pittsburgh District. Fourteen bald eagles were spotted by district personnel at eight sites in western Pennsylvania and eastern Ohio.

"During the last five years, we've noticed an increase in the number of wintering eagles in Pennsylvania and Ohio," said Kirk Piehler, wildlife biologist. "In Pittsburgh District alone, observations have increased from three bald eagles in 1992 to the 14 documented at six Corps reservoirs in 1997."

At least a few of the bald eagles are hanging around.

"We know of at least six bald eagle nest sites on Corps lands in 1997," said Piehler. "Many of these nests are newly established."

Surveys were conducted Jan. 8-11 at all 16 district reservoir projects in western Pennsylvania, Ohio, and West Virginia, and at the locks and dams on the Allegheny River. The surveys help determine the number of wintering bald eagles nationwide. The annual mid-winter survey is conducted as part of a national effort administered by the Department of the Interior. Individual states coordinate surveys within their borders.

Corps restores Poplar Island

By Doug Garman
Baltimore District

As ports across the nation struggle to find suitable dredge disposal sites, federal, state, and local agencies are developing a model restoration project that will ensure the long-term viability of Maryland's largest seaport and enhance the overall health of the Chesapeake Bay.

At the center of this project is a cluster of four small islands in the bay called Poplar Island, located just off-shore in Maryland's Talbot County. Federal and state resource agencies plan to restore Poplar Island to its 1847 size of about 1,110 acres.

Using nearly 38 million cubic yards of clean sand and silt dredged from the bay's shipping channels, officials will rebuild the island's eroded wetlands and wildlife habitats. These habitats are vital nesting and nursery areas for many of the Chesapeake Bay's fish, shellfish and wildfowl.

At one time, Poplar Island was a thriving habitat and a vacation retreat for Presidents Roosevelt and Truman. But years of steady erosion have reduced it to a cluster of low, marshy knolls and tidal mud flats that today totals about five acres.

Baltimore District and the project's sponsor, the Maryland Port Administration, plan to begin building the first portion of the 35,000 feet of containment dikes at Poplar Island this spring. The dikes, built of sand and a variety of rocks and stone, will protect it from erosion.

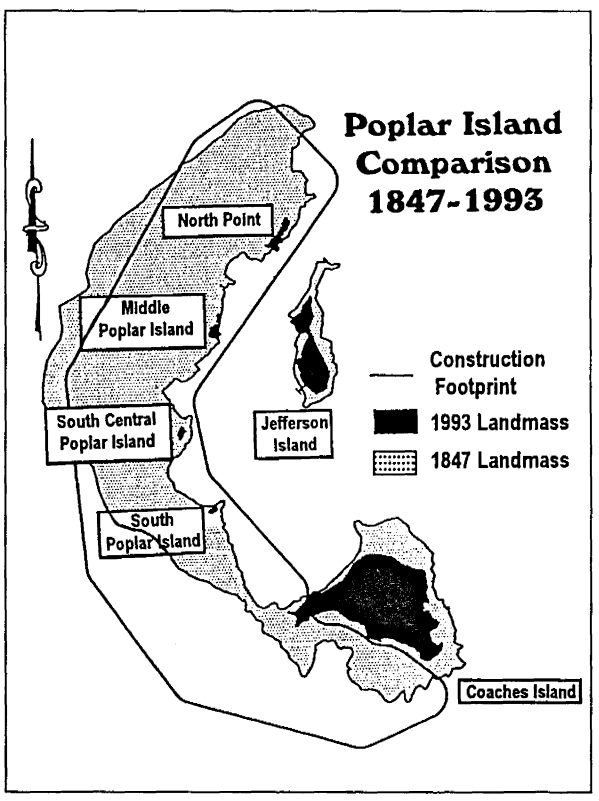
"The first phase of the dike construction will take about 15 months to complete," said Scott Johnson, project manager. "During this phase, we plan to build dikes that will contain 640 acres of dredged material. In three-to-five years, a second contract will be awarded for dikes to enclose the project's remaining 470 acres."

Within the dikes, the district plans to build about 555 acres of upland habitat and an equal amount of wetland habitat. The wetlands will be further divided into about 444 acres of low marsh and 111 acres of high marsh. These areas will enhance the Chesapeake Bay's aquatic vegetation and growing populations of eagles and ospreys, herons, egrets, black ducks, and other wildfowl.

"The Poplar Island project is a cost-effective and environmentally beneficial solution to the dredged material placement problems facing the Port of Baltimore," said Baltimore District Engineer Col. Randall R. Inouye. "Its success could serve as a national model demonstrating that clean dredged material can be a valuable resource rather than a waste."

"This project is a win-win proposition," said Sen. Paul Sarbanes. Sarbanes and other members of Maryland's congressional delegation have strongly supported the Poplar Island effort. "It will not only help alleviate Maryland's dredged material disposal problems but provide substantial environmental benefits by creating new habitat for waterfowl and other wildlife, and reducing the flow of harmful sediments to the bay."

Port of Baltimore officials estimate that during the next 20 years, maintenance dredging and improvements to the Chesapeake Bay's shipping channels could generate as much as 100 million cubic yards of dredged material.



Officials add that Hart-Miller Island, Maryland's current dredged material placement site in the upper portion of the bay, will fall short of meeting the region's future needs and that additional suitable placement sites are needed.

For this reason, the Poplar Island project has become a key component in the long-term effort to keep the Port of Baltimore open, fully functional and competitive.

Corps officials estimate that it will cost about $427 million to build and operate Poplar Island during the next 25 years.

Construction workers pave a driveway. The new family housing at Fort Stewart, Ga., has paved driveways, sidewalks, and carports. Each structure has four units, all with different exteriors.

New military housing is bigger, better,

Article by Victoria L. White
Photo by Jonas Jordan
Savannah District

When Spc. 4s Devin and Meshall Winnegan come home from long duty days at Fort Stewart, Ga., they relax in their beautiful new home with their two children, Jasmine and James. They're proud of their new home and it *does* look like something out of a magazine — palladian windows, huge laundry room and kitchen, living and dining room combination, lots of cabinets, and much more space than the housing where they lived before Christmas.

Their new home is so beautiful, soldiers come over for tours, and the Winnegans gladly oblige. Most of those tourists still live in the old housing area and are excited about moving to Sicily Street in the new housing area being built by the Savannah District. When this project is done in the spring of 1998, 58 homes will stretch across 88 acres and house 232 families.

"This sure doesn't seem like military housing," said Devin. "This is so nice inside and out! For a change, we have our privacy and the kids can have theirs."

"I love the bigger bedrooms, and so do the kids," Meshall said. "We've got two full baths upstairs, and it's wonderful having our private bath in the master bedroom, and the kids have their own. The kids can play right outside, too, where we can keep an eye on them."

The Winnegans are one of 28 families that began moving into the new housing area on Dec. 20. Neighbor Kelly Tucker, whose husband Richard is a sergeant with the Headquarters Company of the 7th Infantry Division, is another happy resident who, like the Winnegans, often hosts tours. They have never lived in military housing.

"We sure didn't expect this," Kelly said. "We have more cabinet space than we've ever had — we had to buy cabinets to use in other houses. Now I've got to get rid of those because I don't need them any more. It's so much quieter here, too."

Mike Jacobs, the district's project engineer, is happy because these families are happy.

"I don't always get to see the housing units after they've decorated, but I do talk to the families after they move in and it really makes me feel good that they're so happy with their new homes," said Jacobs. "People say they can't believe the Army is doing this for the soldier. This project is 'the only show in town' and I feel so lucky being a part of it."

Design of the housing areas began in March 1995, with construction starting in February 1996. Officials at Fort Stewart gave the district general guidelines about their needs "and we refined them a little from there," Jacobs explained. "Anne de la Sierra at the district managed the design phase and she was a real anchor and key player in this project. The flow of getting the job done has been good from the beginning and I can't say enough good things about Anne and Steve Turner for their support at the district. We never had meetings 'just to have meetings.'"

Cromwell Associates from Arkansas designed the housing area. Though all floor plans are the same design inside, there are four different exteriors, so the housing area doesn't look anything like typical military housing.

"Every shrub is by design," Jacobs said. "There will be playgrounds, streetlights, basketball courts, a jogging trail. It's a complete, landscaped community."

There are also 14 units specially designed for handicapped residents.

The housing area is being built in four phases. "We'll turn over 68 units during Phase II," Jacobs said.

Fort Knox housing renovated

Contractor salvage reduces Army costs

By Justine Dodge
Louisville District

As the demolition crew extracted refrigerators and air conditioners from the massive hulk that used to be Wherry family housing, it was obvious that change was underway.

Prichard Place Army Family Housing Area at Fort Knox, Ky., is being converted from junior enlisted multiple family quarters (Wherry housing) to single family units.

Four hundred eighteen Wherry units are being demolished and replaced with 140 new units. There is also an option for 10 more dwellings to be developed, if needed.

Fewer troops on post resulted in the reduction of quarters. "There are going to be fewer quarters than before because the 194th Armored Brigade was deactivated," said Steve Hardsaw, project engineer. "That took a lot of Army families out of Fort Knox."

Demolition of the housing began on Dec. 15 and was completed last March. "It took awhile. We were trying to demolish a house a day," said Karen Sweeney, project engineer.

The demolition crew was also allowed to salvage and take what they want out of the units, which also took time. Contractor profits from salvage were factored into the demolition contract and saved the Corps money, according to Sweeney.

Seeing Prichard Place demolished was bittersweet for Russell Boyd, a district architect with the project. As a child, Boyd lived in Prichard Place. He remembered the housing area as "pretty nice, the yards were clean and the place was really well maintained."

Boyd was in second grade and lived in Prichard Place for a year while his family was stationed at Fort Knox. At the time, Boyd said that he thought "the house was a step up from their last one."

Boyd said he enjoyed living in Prichard Place, but he remembers strict rules regarding bicycles on sidewalks. "We had to walk our bikes on the sidewalk," Boyd said. "You could only ride your bike on the streets of the housing area."

As for as the recent demolition, "soldiers deserve quality housing and it's time for Prichard Place to be rebuilt," Boyd said.

The Prichard Place family housing construction is a congressional project, and the programmed project cost is $19 million. All contracts for the conversion will be completed in March 1999.