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Marine environmental monitoring program celebrates 25 years

By GAIL FRENCH and DR. TOM FREDETTE
New England District

The Corps' New England District has been carrying out its environmental stewardship mission by managing and monitoring ocean disposal sites through the Disposal Area Monitoring System (DAMOS) for 25 years. This extensive experience has gained the DAMOS program national and international renown as a source of reliable and relevant information on the environmental impacts of dredged material disposal.

DAMOS, begun in 1977, is a multi-disciplinary environmental monitoring program. Its primary purpose is to manage and monitor New England's ten offshore dredged material disposal sites from Long Island Sound to Maine. Each year these sites receive 1.5 million cubic meters of dredged material.

New England District employees use DAMOS to accomplish monitoring goals by incorporating a wide range of tools and technology, including surveys of the ocean bottom using sonar, underwater photography, divers, sediment analyses, biological analyses, and submersible vessels.

The program addresses not only short-term impacts to the sites but also longer range, cumulative impact questions, such as food web impacts of contaminants, beneficial fishery effects, and long-term cap effectiveness. Program results are shared with the U.S. Environmental Protection Agency, other federal and state resource agencies, and the general public.

Since its inception, the program has produced more than 100 technical reports (the DAMOS contribution series), 60 journal or conference papers, brochures and a video. DAMOS also maintains an active mailing list and has a web site, at www.nae.usace.army.mil/environm/damos/splash_page.htm.

Twenty-five years of DAMOS monitoring has demonstrated that dredged material, when thoroughly tested and deposited in properly located ocean disposal sites, will remain where it is placed and have no significant effect on nearby marine resources.

District employees also have used DAMOS to assist in developing techniques for disposing of contaminated sediment in the marine environment. Two of these techniques are capping and Confined Aquatic Disposal (CAD) cells. Capping contaminated sediment dates back to the beginning of DAMOS. The Corps has conducted extensive studies to determine whether highly contaminated sediments

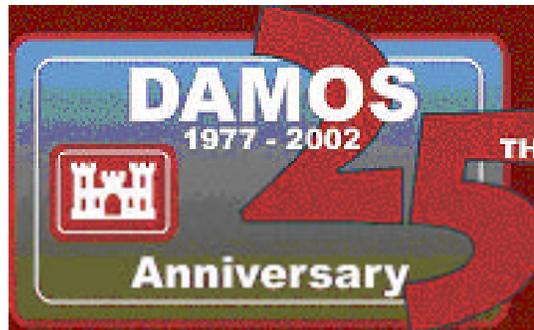
could be disposed of and covered by relatively uncontaminated sediments, thus isolating the contaminants from the environment.

The DAMOS program has also helped

develop Confined Aquatic Disposal cell techniques. CAD cells are excavated into the seafloor and are used to contain contaminated sediment. Sand cap effectiveness was intensively evaluated using coring, ground penetrating radar, and other techniques, which indicated that placement and capping operations successfully minimized the potential for exposure of contaminants to the environment.

District employees have found DAMOS to be a very successful program. They have used its wide array of monitoring tools and disposal techniques to support carefully managed ocean disposal and the most cost-effective methods of dredged material disposal, while ensuring protection of the marine environment.

For more information, contact the New England District Public Affairs Office at 978-318-8777.



INSIDE

2

Barrier for aquatic nuisance species

3

Environmental operating principles

4

Maryland terrapin habitat

5

Ducks Unlimited and Corps conserve wildlife habitat

6

Fort Benning grinder

7

Corps-EPA to restore urban rivers

8

Swiftwater Park project

9

Corps liaison assists East Palo Alto

10

Nanofiltration system

11

Lt. Gen. Frederick J. Clarke award

12

UXO removal at Fort Ritchie

13

COE partners with Nature Conservancy

14

Restoring FUDS in Region 7

15

Balancing economy with environment



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Lt. Gen. Robert B. Flowers

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Electric fish barrier helps turn around aquatic nuisance species problems

By VANESSA VILLARREAL
Chicago District

Described as a charge as big as a flashlight battery, an electric fish barrier is currently on the bottom of the Chicago Sanitary and Ship Canal—and it's steering non-native fish species away from the Great Lakes and Mississippi River basins.

This \$2.2 million electrical barrier, designed and built by the Corps, is at river mile 296.25 of the Chicago Sanitary and Ship Canal, the sole waterway linking the Mississippi River basin with the Great Lakes basin. A series of low-voltage electric cables have been placed underwater with the intent of shocking the fish as they try to swim toward the Great Lakes. The shock is designed to turn them around.

This past April, the Chicago District began full-time operation of the aquatic nuisance

to that. They feel uncomfortable. They turn around and go the other way."

Smith-Root, Inc., the patent holder, operates and maintains the barriers, under contract with the Corps. The Corps also has a separate contract with the University of Illinois to perform the monitoring of the effectiveness of the barrier. The monitoring involves implanting radio transmitters into common carp that will be released periodically and their movements will be tracked individually.

There is concern that four species of Asian carp currently in the Mississippi River basin will ultimately reach the Great Lakes. According to the U.S. Fish and Wildlife Service, there was a sighting of a bighead Asian carp 40 miles south of the barrier.

"We cannot say, of course, what (the Asian carp's) ultimate impact might be on fish

populations but there's reason for grave concern," said John Rogner, Fish and Wildlife Service, at a press conference Chicago Mayor Richard Daley held on July 13 to talk about invasive species in the Great Lakes region. "They feed on very small microscopic plants and animals and they form the very base of the food web that all fish are dependent on."

Daley recently asked Congress for funding to study ways to keep invasive species from getting into the Great



Chicago District Engineer Col. Mark Roncoli addresses Mayor Daley (far right) at Daley's press conference. To Col. Roncoli's right is John Rogner, field supervisor, U.S. Fish and Wildlife Service.

Lakes. species dispersal barrier. The Corps marked the event with a dedication ceremony on April 18 at the barrier site near Lockport, Ill.

"Nuisance species disrupt the balance of inland ecosystems by competing with native species for food, living space and spawning areas," Frank Veraldi, Corps fisheries biologist, said. "Several aquatic nuisance species, such as the round goby and zebra mussel, have already made their way into the Great Lakes and Mississippi River systems." Many of the species were introduced into the Great Lakes via the ballast water from ocean-going ships.

"As far as we know, this is the largest electrical barrier in the world," said Beldon McPheron, project manager. "The fish come up

Lakes.

"Basically, this can destroy the whole life of a pond, of a river, of a stream," Daley said. "It's up to all of (the respective agencies) to really work to end the invasive species here."

The International Joint Commission recently has recommended that a second barrier be installed as a backup to ensure that the carp and other invasive species are stopped in their tracks.

"The construction of a dispersal barrier demonstration project is an essential step to identify ways of protecting the Mississippi River and Great Lakes ecosystems and economies," said McPheron.

For more information, contact the Chicago District Public Affairs Office at 312-353-6400.

Environmental operating principles: The challenge and path ahead

By **DR. WILLIAM KLESCH, HQUSACE**
and **DR. CRAIG FISCHENICH, ERDC**

Because our quality of life, national security and our very survival depend upon sustained and balanced ecosystems, environmental concerns are increasingly becoming a significant part of all U.S. Army Corps of Engineers activities.

On April 17, 2001, Chief of Engineers Lt. Gen. Robert B. Flowers challenged the Corps to develop a set of Environmental Operating Principles. Less than a year later, on March 26, 2002, he publicly unveiled the principles at the dedication of the Davis Pond Freshwater Diversion project in Louisiana – an environmental project designed to aid the restoration of salt marsh habitat being lost due to a lack of soil replacement and eventual subsidence.

At that time, the Chief said the principles illustrate ways in which the Corps missions must be integrated with natural resource laws, values, and sound environmental practices. They are meant to give “corporate coherence” to all Corps work so people everywhere will recognize the Corps’ role, and responsibilities for sustainable use, stewardship, and restoration of the country’s natural resources and those of other countries in which the Corps conducts activities. The principles also make evident the connection among water resources, environmental protection, public health, and national security.

Doctrine to accompany the principles has also been developed, setting the direction the Corps must take to achieve greater synergy between environmental sustainability and the execution of its civil works and military activities. This new direction will require all of us to also change our views, expectations – our ‘mental models’ if you will – and our understanding of how our activities impact the natural world.

Challenges Ahead

The challenge for us is to ensure that everyone within the Corps adjusts their thinking about our environmental responsibilities in accordance with the principles and doctrine, while making daily project decisions and taking actions. These individual adjustments will cause an organizational culture change within the Corps.

The Corps also recognizes that some people believe environmental sustainability and economic development are antithetical. The Corps does not hold this position. Rather, it understands that we can and must choose to design and act in ways that take inspiration from nature and are modeled after it because economic development is intimately linked to, and ultimately limited by, the health and productivity of our ecological resources.

The Environmental Operating Principles and doctrine are designed to restructure internal Corps methods of operation and behavior. However, to be effective, they must become part of the Corps culture, which in turn is a collective and cooperative effort that will take leadership, time and understanding. Today, the

Corps performs multi-faceted military and civil missions in service to the country. These missions have both direct and indirect impact on the natural environment. The challenge in developing the principles was to ensure that they would be broad enough to apply to this wide range of activities, and yet concrete enough to meaningfully guide the environmental responsibilities of the Corps into the future.

These principles are also to be integrated into the Program Management Business Process and other Corps decision-making processes at the earliest stage possible. A multi-discipline team is currently drafting a program management plan for their implementation. The Corps culture must now embrace and integrate these principles across all programs and projects to make them a reality.

While the principles articulate a “new” ideology for the Corps’ actions, much of the doctrine is not new. Indeed, many of these principles are already manifest in long-standing laws, regulations and policy. The Corps can point to several existing projects that reflect the principles’ implementation – including some that are decades old.

Current Projects

Efforts to incorporate the principles into current projects are widespread. While considerable media attention has focused on the Corps’ efforts to restore the Kissimmee River and the Everglades, numerous unheralded Section 1135, Section 206 and congressionally authorized projects are being implemented with specific objectives in consonance with the principles. Some rank among the most ecologically progressive projects known.

The challenge of implementing the principles into existing and future projects will be formidable. There is much yet to be learned about ecosystem processes. The principles require that we expand our partnering capabilities, and consider our projects in a much broader context. And we must shift our focus from the perspective of human uses to that of ecosystem needs, because the rules governing the dynamics of ecological systems ultimately set the constraints on allowable human activities.

Focusing on ecosystem needs acknowledges what scientists have come to understand – that ecological sustainability is primary to all measures of sustainability. This does not mean that sustainability is exclusive of social and economic development; it simply means that social and economic systems are subsystems of the environment, not the other way around. We must take our inspiration from nature as we provide the services demanded by society while simultaneously sustaining our important natural resources.

These principles will show the Corps the direction to do just that.

For more information, visit the Corps Environmental Principles web site at www.hq.usace.army.mil/cepa/envprinciples.htm.

Baltimore district restores Maryland's terrapins' habitat

By MARSHALL HUDSON
Baltimore District

The diamondback terrapin is losing much of its nesting and nursery habitat because of shoreline development and the erosion of the Chesapeake Bay islands. The U.S. Army Corps of Engineers Baltimore District and its partnering agencies are working to restore the terrapins' lost habitat with an environmental restoration project at Poplar Island, Md., in the upper middle Chesapeake Bay.

In August, hundreds of diamondback terrapin hatchlings began to emerge from nests on the island signalling a success. "It's great that the Army Corps of Engineers and the Maryland Port Administration are restoring this important habitat with this project," said Phil Allman, a biologist with a group from Ohio University monitoring the terrapin nests.

Poplar Island, which had eroded to less than 4 acres in 1999, is now a dredged material beneficial-use placement site. It is being restored to its approximate 1847 footprint of 1,140 acres with the placement of clean dredged material taken from the approach channels to the Port of Baltimore. When complete, 570 acres of the island will be upland habitat and 570 acres will be wetland habitat.

The diamondback terrapin is just one of dozens of endangered, threatened, and important native wildlife species thriving at the beneficial-use project. "We weren't expecting the wildlife to return to the island in such numbers, since we are still years away from completing the upland and wetland habitat," said Scott Johnson, Corps program

manager for Poplar Island. "But as with the bald eagles, osprey, herons, egrets, pelicans and terns, we're glad to have the terrapins here and are doing whatever we can to encourage them to stay while we finish rebuilding the island."



Brian Walls, project manager, Baltimore District, with a diamondback terrapin.

The terrapins are being collected, tagged and then released into the Chesapeake Bay. With an average clutch size of 13 eggs, it is hoped that of the estimated 1,300 terrapin hatchlings that emerge, those that survive to maturity will return to Poplar Island to nest again next year.

Poplar Island is a partnership of the Corps, the Maryland Port Administration and numerous other state and federal agencies. The largest project of its kind, Poplar is being watched as a potential model solution to the national problem of dredged material placement.

For more information, contact the Baltimore District Public Affairs Office at 410-962-7536.

St. Louis District uses meetings to educate residents about FUSRAP

The St. Louis District of the U.S. Army Corps of Engineers conducted public training to educate North St. Louis County, Mo., residents about the Formerly Utilized Sites Remedial Action Program (FUSRAP). The two-day training sessions were offered in August to familiarize non-technical people with technical process and terms associated with the ongoing environmental cleanup project in North St. Louis County, radioactivity, risk, Superfund requirements and the cleanup process.

FUSRAP was created by the U.S. Department of Energy in the 1970's to clean up radioactive contamination at sites used in the nation's early atomic energy program. Congress transferred responsibility for the program to the Corps of Engineers in October 1997.

The formerly used sites transferred to the Corps are currently in various stages of cleanup. The Corps develops cleanup proposals that balance effectiveness, technically

sound action steps and cost.

The Corps is providing this training to help the public better understand technical information which will be presented in cleanup documents when they are released later this year. The training was limited to general information and did not identify or discuss final cleanup alternatives, which are still under development.

This is the first public education training of this type that has been offered through FUSRAP. Other districts plan to offer similar training for residents living near their FUSRAP projects. The Corps is committed to keeping the public informed about environmental cleanup and initiating dialogue with the public concerning its cleanup programs.

For more information on FUSRAP, contact the St. Louis District Public Affairs Office at 214-260-3932, or visit the internet site at <http://hq.environmental.usace.army.mil/programs/fusrap/fusrap.html>.

Ducks Unlimited and Corps work to conserve imperiled wildlife habitat

By JIM POGUE
Memphis District

With a pristine wetland as backdrop and songbirds providing the soundtrack, the U.S. Army Corps of Engineers and Ducks Unlimited formally agreed to work together to protect, restore and manage wildlife habitat in the U.S. A Memorandum of Understanding (MOU) signing ceremony took place July 22 at the national headquarters of Ducks Unlimited in Memphis, officially recognizing a cooperative relationship that has been steadily growing for years.

Don Young, Executive Vice President of Ducks Unlimited, and Dominic Izzo, Principal Deputy Assistant Secretary of the Army (Civil Works) cosigned the MOU that provides a foundation for collaboration between the two organizations.

"This agreement is very good for the Corps of Engineers for two reasons," said Izzo. "First, over 20 percent of the Corps' budget is targeted at the

year spent on conservation work across the nation – the vast majority dealing with wetlands and water resources.

Izzo noted three areas where the Corps and Ducks Unlimited are already working in partnership. These areas are the Vic Fazio Yolo Wildlife Area near Sacramento, Calif.; the Upper Susquehanna River Basin study in New York and the Sherburne Wildlife Management Area in Louisiana. "Coastal Louisiana will be a great challenge for the Corps of Engineers in coming decades," said Izzo.

Izzo further emphasized the importance of the agreement. "This MOU signals our intent to cooperate at the national level," he said.

Speaking on behalf of Ducks Unlimited, Young said, "The memorandum represents a shared commitment to our nation's wetlands. We are pleased to have the Corps as a partner and we look forward to our working relationship. With our shared strength, we have a tremendous

opportunity to conserve and restore landscapes inhabited by waterfowl and hundreds of other wildlife species."

Young also spoke of the Corps' recently developed Environmental Operating Principles. "Lt. Gen. Flowers has made clear they (the Operating Principles) will be applied to everything the Corps does."

Collaboration between Ducks Unlimited and the Corps of Engineers is expected to have an impact on diverse landscapes in the United States. Under consideration are plans to restore meanders in channelized portions of Arkansas' Cache River and work in other areas of mutual interest including Chesapeake

Bay, San Francisco Bay, the Pacific Northwest and the Mississippi, Missouri and Illinois river systems.

For more information, contact the Memphis District Public Affairs Office at 901-544-4109.



Photo by Jim Gandy, Ducks Unlimited

Don Young, Executive Vice President of Ducks Unlimited wears a Corps ranger's hat he received as a gift more than 20 years ago when working for the COE in North Dakota. Dominic Izzo looks on.

environment and conservation. Second, this emphasizes our new mode of operation: partnering. We just can't do it alone anymore."

With an annual budget of \$4 billion, this percentage equates to roughly \$800 million each

Grinder reduces Fort Benning solid waste

By DANA FINNEY
ERDC-CERL

A research team ran a demonstration at Fort Benning, Ga., in June to assess whether a new technology can successfully reduce the volume of municipal solid waste (MSW) while providing useful end products. The novel solid waste processing system is designed to shred mixed household garbage and greatly reduce the waste volume. A lightweight cellulose “fluff” by-product may have beneficial use as a soil amendment, while the remaining material has potential reuse in building products such as recycled plastic lumber.



Lightweight cellulose “fluff” may have reuse to restore damaged lands.

The Engineer Research and Development Center’s Construction Engineering Research Laboratory (CERL) is demonstrating the technology in partnership with Headquarters, U.S. Army Forces Command, Fort Benning’s Directorate of Facilities Engineering and Logistics, and Bouldin & Lawson Worldwide, Inc.

Cities across the nation face a huge challenge in managing municipal solid waste, and the problem is growing as landfills reach capacity. Military installations, like cities, are responsible for proper disposal of MSW produced on post. Army installations disposed of 1.2 million tons of garbage during the first three quarters of Fiscal Year 1999 at a cost of \$53.2 million. Fort Benning alone disposes of a whopping 20 tons of MSW per day in its landfill.

The solid waste processing system has several stages. First the MSW goes into a low-speed, high-torque shredder. Next are two grinding processes, followed by a trip through a magnetic separator that removes ferrous metals from the material. It then enters a hydrolyzer before final drying and separation steps. The hydrolyzer is like a giant pressure cooker that uses extreme heat, steam, and pressure to break down carbon bonds in the material.

At the end of treatment, by-products include cellulose pulp and separate, low-volume residues of metal, glass and plastic. A second part of the Benning project, slated for the fall planting season, will apply the cellulose pulp to two test plots. The goal is to see if nutrients left in the material can benefit plant growth or if the substance can serve as a soil stabilizer. The pulp will first be analyzed to ensure it is environmentally safe to use. The material will be screened for lead, pesticide, herbicide, PCB, and dioxin contamination.

A third phase of the project will evaluate the feasibility of using the remaining coarse material to make useful products such as recycled plastic lumber. The contractor developed samples from Benning’s plastic by-product using extrusion. CERL will test them for properties critical to producing good quality recycled plastic lumber, such as flexural and compressive strength, density, and thermal expansion. If the waste holds up to the standards, there may be a market for it in the recycled plastic lumber industry. Waste metals will also be examined for possible sale to the Defense Reutilization and Marketing Organization.

The demonstration at Fort Benning was a follow-on to one at Fort Campbell, Ky., last year. The first field trial led to recommendations from CERL for improving the equipment, and the system used at Benning included modifications that the manufacturer incorporated as a result. Air emissions also were evaluated at Fort Benning.

For more information, contact Deborah Curtin at CERL, 217-398-5567 or email at Deborah.R.Curtain@erdc.usace.army.mil.

Bourne pipeline dedication ceremony held

By TIMOTHY J. DUGAN
NEW ENGLAND DISTRICT

The team that ensured on-time completion of the three-mile pipeline connecting the Bourne Water District to the Upper Cape Regional Water Supply System on the Massachusetts Military Reservation (MMR) held a “turn the water on” ceremony on June 27 in Bourne, Mass.

The team includes the Bourne Water District, MMR, the Massachusetts National Guard Environmental & Readiness Center, Air Force Center for Environmental Excellence, and

the U.S. Army Corps of Engineers New England District.

In May 2002, the Department of Defense committed to installing the pipeline by July 1 to provide the Bourne Water District with enough water to meet the peak summer demand. Construction of the pipeline began on May 13.

The pipeline will add about two million gallons of water per day to the Cape Cod District’s water supply after this connection to the Upper Cape Regional Water Supply System is completed.

For more information, contact New England District Public Affairs Office at 978-318-8777.

Corps-EPA projects restore degraded urban rivers

By CANDICE WALTERS
HQ USACE

The U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers are beginning to identify potential pilot projects on which to work together to restore degraded urban rivers. On July 2, the two agencies signed a Memorandum of Understanding (MOU) committing to a strategic partnership to use their Congressionally granted resources and authorities to select and begin work on eight pilot projects in partnership with state, local and tribal authorities.

The partnership is expected to interest urban communities facing water quality, wastewater management and other quality of life issues, as well as nongovernment environmental groups specializing in protection of American rivers, one of our nation's most critical natural resources.

Despite water quality improvements during the last 20 years, many American rivers in urban areas suffer from contaminated sediments, degraded water quality, and lost habitat. These conditions can adversely affect the health of humans and wildlife, the ecological value of aquatic resources, and can limit recreational and other economic uses.

The interagency MOU will help coordinate activities to address the issue of water quality and improvement, human and environmental health, habitat restoration and preservation, and public use and enjoyment of the rivers. The projects will demonstrate how coordinated government and private sector efforts can restore contaminated rivers while revitalizing urban environments. The MOU coordinates remedial, water quality and environmental restoration activities under the Clean Water Act, the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act, and the

various Water Resources Development Act authorities.

The Hon. Les Brownlee, Under Secretary of the Army, signed the MOU for the Army. Signing for EPA were Marianne Lamont Horinko, Assistant Administrator for the Office of Solid Waste and Emergency Support, and Benjamin Grumbles, Deputy Assistant Administrator for the Office of Water.

Maj. Gen. Robert H. Griffin, U.S. Army Corps of Engineers Director of Civil Works, represented Brownlee at the signing ceremony. He stressed the memorandum's importance stating, "Balancing environmental protection and infrastructure needs — especially as it relates to America's precious water resources — is one of the nation's greatest challenges. This memorandum is another important tool for not only achieving that balance in the future, but in improving the current health of urban rivers for the benefit of the people who live along and use them, and for the surrounding environment that depends upon them."

"This is another step in the continuing commitment of the U.S. Army Corps of Engineers to finding sustainable solutions for the environment. We are proud to partner with the EPA in this effort," Griffin said.

Horinko praised the MOU, stating that it "sets the stage for the EPA's Office of Solid Waste and Emergency Response, the Office of Water, and the Corps to bring together, in the most efficient and effective ways possible, the resources needed to restore urban rivers that have been subjected to decades of contamination. "This is precisely what we need to restore these rivers, which are so vital to the health of the environment, and to our drinking water supply, recreation, transportation, and commerce," she said.

For more information, contact the U.S. Army Corps of Engineers Public Affairs Office at 202-761-1806.

New England District to rehabilitate former drive-in

By ANN MARIE HARVIE
New England District

The New England District and the Rhode Island Department of Environmental Management (RIDEM) held a project cooperation agreement ceremony June 17 to turn an old drive-in movie theatre into a thriving wildlife habitat in Lincoln, R.I.

Col. Brian Osterndorf, District Engineer, joined Senators Jack Reed and Lincoln Chafee, Gov. Lincoln Almond and RIDEM officials at the signing for the Lonsdale Drive-In Aquatic Habitat Restoration Project. The non-federal share is about \$715,000 of the total project cost, estimated at \$2 million.

Located in the Blackstone River Valley National Heritage Corridor, the Lonsdale Drive-In is located along the Black Stone River. "Work would include the construction of about seven acres of wetlands, and the restoration of about ten acres of upland riparian habitat," said Dubán Montoya, Project Manager. "The constructed

wetlands would include about 3.6 acres of emergent and open water habitat and about 3.4 acres of scrub/shrub and forested wetlands."

The constructed wetlands will consist of a single depression wetland connected to the Blackstone River via two channels.

"The recommended plan is favored by the project sponsor, is cost effective, and within the available budget of the non-federal sponsor," said Montoya. The site was developed as an outdoor drive-in movie theatre in the early 1950's. Approximately 20 acres of the 37-acre site was paved to construct the drive-in.

Once the construction contract is awarded, which is expected early in fiscal year 2003, the initial work should be completed in about five months. The plantings would be monitored for two growing seasons. At that time, the project will be turned over to the non-federal sponsor.

For more information, contact the New England District Public Affairs Office at 978-318-8777.

Swiftwater Park project receives major environmental award

By JOHN KILLORAN
Alaska District

The Alaska District's project to restore a fragile aquatic ecosystem on the world-famous Kenai River earned the Eagle Award from the Kenai River Sportfishing Association. Eagle Awards are given annually to those who demonstrate excellence and dedication to fish habitat protection along the Kenai River, according to the association.

The Swiftwater project, undertaken in cooperation with the City of Soldotna, preserved and improved more than 400 feet of the most endangered riverbank, protecting it from further damage, and preserving unprotected areas with walkways and light-penetrating platforms. Swiftwater Park is at approximately mile 23 of the Kenai River, probably the best-known Chinook (King) salmon fishing river in the world.



Photo by Jim Hannon

James Dalton, Deputy District Engineer for Programs and Project Management, inspects the Kenai River fishing platform.

“The Swiftwater project is one of the finest accomplishments of the Corps of Engineers to enhance our environment in Alaska,” said Col. Steven Perrenot, District Commander. “It was a great opportunity to work with local governments, and in cooperation with other state and federal

agencies, to protect and improve this very important river.”

Alaska Governor Tony Knowles presented the 2002 Eagle Award to Perrenot, during a July ceremony at the association's Kenai River Classic event, which promoted preservation and rehabilitation of salmon habitat.

Other participants and guests at the award banquet included United States Senators Ted Stevens and Frank Murkowski (Alaska), Kit Bond (Missouri), Conrad Burns (Montana), Mike Enzi (Wyoming), Mitch McConnell (Kentucky), U.S. Secretary of Labor Elaine Chao, Postmaster General Jack Potter, Alaska State Senate President Rick Halford, University of Alaska President Mark Hamilton, Astronaut Michael Collins, and a host of other dignitaries.

Impacts to the river brought on by fishing popularity had reached crisis level and caused significant loss of habitat. In recent years, non-fishing recreation users greatly increased the

pressure on riverbank habitat, intensifying irreparable damage to the riverbanks. Chinook and Pink salmon use the banks for spawning.

The project was authorized under Section 206 of the Water Resources Development Act of 1996, which allows the Corps of Engineers to cost share aquatic ecosystem habitat restoration projects.

Bank areas were stabilized by using a combination of rootwads, geotextile coil rolls with plantings of protective vegetation, siltation fences, willow stakes and posts, and large boulder placement. Extensive revegetation was performed to assist in restoration of a naturally functioning ecosystem.

Walkways, boardwalks and other public access structures were designed to minimally affect the environment and to be compliant with

the Americans with Disabilities Act. A boat launch facility, handicapped parking and other public facilities were rebuilt using the latest techniques of protecting the environment.

For more information contact Alaska District Public Affairs Office at 907-753-2520.

San Francisco District liaison valuable asset to East Palo Alto

By **CINDY FERGUS**
San Francisco District

East Palo Alto, Calif., a small city of 33,000 people living on 2.5 square miles, has a lot going for it with its almost ideal location – adjacent to San Francisco Bay and the Silicon Valley, halfway between San Francisco and San Jose.

But there have been some problems for the 19-year-old city – scattered high concentrations of a variety of contaminants within its boundaries, a lingering perception that it is more contaminated than it actually is, a high crime rate and the highest levels of unemployment and poverty and lowest median income in San Mateo County.

The city is making progress by cleaning up and redeveloping its brownfields areas. A brownfield is an abandoned, idled or under used industrial or commercial facility where expansion or redevelopment is complicated by real or perceived environmental contamination. The U.S. Army Corps of Engineers is helping East Palo Alto address its problems, in part through the efforts of Debra O’Leary and the Corps’ Interagency and Intergovernmental Support Program.

The Corps’ San Francisco District has temporarily assigned O’Leary to East Palo Alto to assist with its brownfields redevelopment effort. That effort is gaining steam, thanks to the city’s designation as a Brownfields Showcase Community by the Environmental Protection Agency. The designation enables the city to leverage federal assistance, some of which is being provided by O’Leary and the Corps.

The city is focusing its effort on the Ravenswood Business District and the adjacent Four Corners redevelopment area, totaling approximately 135 acres. The area is located along the baylands and next to a fragile ecosystem, said O’Leary, who normally works as a project manager for the San Francisco District Regulatory Branch. The city has developed a strategic plan and design for this area, calling for a mixed-use development and employment center with up to 2 million square feet of commercial and high technology offices and light manufacturing.

The city will seek to promote the location of environmentally sensitive businesses, the use of green building practices, and development that enhances and protects the beauty of adjacent resources such as San Francisco Bay, wetlands, and open space areas. The city expects that redevelopment of the entire Ravenswood Business District will create 4,000 new jobs and generate more than \$1 million per year in new tax revenues.

“The city could have redeveloped the area earlier, but instead took the time to do a big community process in which the residents figured out what they wanted in the area,” O’Leary said. “The city is trying to do the right things to make itself sustainable, and we’re trying to help them do that.”

The Corps can help East Palo Alto’s Ravenswood redevelop-

ment efforts succeed in several ways. East Palo Alto seeks continued assistance from the Corps in assessing and cleaning up environmental contamination; and needs assistance in the construction of drainage, sewage, reliable water systems and other infrastructure improvements. The efforts of O’Leary and Lily Lee, Environmental and Economic Development Coordinator, City of East Palo Alto, have been crucial in identifying appropriate federal programs to address these issues.

“Debra is a fantastic asset to the city of East Palo Alto. Her knowledge of the biology of the region and potential ways to improve the infrastructure, as well as her creativity and understanding of how the Corps works, are a great benefit to the economic development of our brownfields areas,” said Lee.

Those sentiments have been echoed by Duane Bay, East Palo Alto’s mayor, who sent a letter to Chief of Engineers Lt. Gen. Robert B. Flowers praising O’Leary’s work and requesting that her assignment be extended for an additional year. Bay cited

O’Leary as “an invaluable addition to our brownfields redevelopment team. “Ms. O’Leary has provided the City with direction and leadership in working with the Army Corps of Engineers to achieve East Palo Alto’s brownfields economic redevelopment goals,” the letter said.

The city also is working to prevent the dangers of flooding. Large portions of East Palo Alto, including portions of the Ravenswood Business District, have experienced severe flooding from the adjacent San Francisquito Creek and San Francisco Bay, making flood damage prevention a top priority. To address these issues, the two counties and the cities of Palo Alto, Menlo Park and East

Palo Alto have formed the San Francisquito Creek Joint Powers Authority (JPA). O’Leary, representing East Palo Alto, is providing support to the JPA in developing a long-term watershed plan which addresses the flooding in East Palo Alto and other municipalities while protecting native populations of fish and wildlife.

“I’m getting a really good sense of what local sponsors go through when developing a civil works project,” O’Leary said.

Moreover, the Corps could assist East Palo Alto to protect and restore the Baylands located east of the city. These baylands are largely diked wetlands, which contain significant natural resources, as well as the challenges of brownfields contamination. The Corps also can assist East Palo Alto and can provide future help to the city as it struggles to become a safer place to live and work.

For more information, contact the San Francisco District Public Affairs office at 415-977-8659. Editor’s note: Debra O’Leary and Candice Walters contributed to this article.



Photo by Cindy Fergus

Debra O’Leary, Project Manager, San Francisco District, views San Francisquito Creek.

Moody AFB to get state's first nanofiltration system

By VERDELLE LAMBERT
Savannah District

By the end of this year Moody Air Force Base will have one of the most up-to-date water treatment plants in the nation and will be the first in Georgia to use a nanofiltration system.

"Moody's drinking water currently meets all Safe Drinking Water Act standards and is safe to drink," said Bill Bryan, chief engineer at Moody AFB. "However, a comprehensive series of tests conducted by Armstrong Labs in 1995 indicated the possibility of a future problem if surface water entered the aquifer through the many limestone sinkholes that exist."

After consulting with Headquarters Air Combat Command, Moody began steps to build a new water-treatment plant that would "meet future requirements that could be out on the horizon," explained Savannah District Corps of Engineers Senior Project Manager Tim Corley. Savannah District supports Moody AFB, which asked the district to build a water treatment plant.

A future requirement, the U.S. Environmental Protection Agency's (EPA) Disinfection/Disinfection By-Product Rule, will call for all groundwater supply systems to have a Trihalomethane (THM) concentration of less than 80 mg/l (milligram per liter) in all parts of the distribution system by the end of 2002. EPA has also given notice that future lower limits are on the horizon.

While Trihalomethane is not a household word, chlorine is. Since the early 1960's, most municipal water systems have been using chlorine to disinfect their water supplies and make them safe from illness-producing bacteria, viruses and parasites. THM's are the most common group of disinfection by-products that are formed when free chlorine, used as the disinfection mechanism, reacts with organic compounds found in the source water. THM presents as a possible health risk, and EPA has concluded that lowering the THM's in the water will reduce the risk of reproductive and developmental health effects and cancer.

State-of -the-art Plant

About a year and a half ago the Savannah District contracted with Thomas & Hutton Engineering to design a state-of-the-art water treatment plant for the base.

"The options we were asked to take a look at were the use of alternate disinfectants not known to form THM's, use of powerful oxidants that change the characteristics of the organic material such that THM's will not form upon chlorination, physical removal (i.e., filtration) of the organic precursors from the system, or connecting to the local county water system," said Chris Stovall, Environmental Team Leader for Thomas & Hutton.

The contractor set up a pilot system at Moody and tested several water-treatment options, including chloramination, ozonation, conventional filtration, membrane filtration with a nanofilter, and granular-activated carbon.

"We ruled out ozonation early on," said Stovall. "The city of Valdosta uses ozonation as their disinfectant: It's very

expensive to construct and very expensive to operate."

During the pilot tests, roughly 40 percent of total THM's was removed from the water with chloramination, 40-50 percent with conventional filtration, about 98 percent using membrane filtration with a nanofilter, and 98-99 percent with granular activated carbon (GAC).

"Only granular activated carbon and nanofiltration consistently achieved the results we needed," explained Stovall. "We compared the life-cycle costs for each, and they were both roughly the same capital cost, but the nanofiltration facility, in the long term, is less expensive to operate."

Membrane makes the difference

Cartridges have to be replaced on a fairly consistent basis with GAC, whereas the nanofiltration system is fairly self-sufficient: the membrane, a thin, solid sheet of polymer (plastic) that prevents undesirable chemicals from entering the water supply, lasts for many years and has to be cleaned only quarterly or biannually, according to Stovall.

"We also visited several plants in Florida to check out nanofiltration as well as reverse osmosis systems, and the experts felt that the nanofiltration system made the most sense for Moody AFB," said Corley.

"We were already looking at the future to make sure we could meet the lower limits for THM that EPA will require in 2003, and nanofiltration allows Moody to do that," Stovall added.

The centerpiece of the nanofiltration system is the membrane. Water comes through the system under pressure great enough to allow only water molecules to permeate the pores of the polymer while blocking total THM's (organics), salts, solids and metals from entering the distribution system. Water that doesn't make it through the membrane, called concentrate, is roughly 15 to 25 percent of the total water flow. It is discharged into the wastewater plant. Water that makes it through the membrane goes through an aeration tower, where hydrogen sulfide is stripped away along with any remaining carbon dioxide.

Thomas & Hutton's design of the 1,050 gallon-per-minute nanofiltration membrane process includes new controls for the three existing wells, new well pump motors equipped with variable frequency drives, chemical feed systems, and a new air stripping (aeration) tower. The design and permitting had to be completed within a five-month time constraint in order to put the project out for bids within the 2001 fiscal year.

This tight schedule was further complicated by the fact that the Georgia Environmental Protection Division had never permitted a nanofiltration system before, so efforts to acquaint the regulatory staff had to be made. Harry Pepper & Associates, Inc., was awarded \$2.8 million to build the new water treatment facility, which was to be completed Sept. 24.

For more information contact the Savannah District Public Affairs Office at 912-652-5758.

Award honors those putting principles in action

The U.S. Army Corps of Engineers is planning to honor annually a District and Division whose programs best exemplify the Environmental Operating Principles by presenting them with the new Lt. Gen. Frederick J. Clarke Award for Leadership in Environmental Sustainability.

Chief of Engineers Lt. Gen. Robert B. Flowers announced, in August, the process and criteria for the award, which is to be presented to the winning district at the District Engineers Conference in January and to the winning division at the Command Council Meeting in February.

Districts are to forward their award submittals to their respective divisions by Nov. 1. Divisions will then select a nominee from their divisions and submit that package along with their own division package to headquarters by Nov. 22. An award review panel will select the winners.

The focus of the competition is on honoring those programs that showcase the Corps' dedication to planning, design, construction, operation and maintenance of environmentally sustainable civil, military, regulatory, and other activities. The winning programs will be those that use the Project

Management Business Process as a vehicle for implementing the Environmental Operating Principles.

Naming the award for former Chief of Engineers Lieutenant General Clarke reflects his legacy of environmental leadership within the Corps of Engineers. Through his leadership and belief that the Corps should listen and respond constructively to its opponents, the Corps became one of the first federal water resource agencies to institutionalize environmental views. He also established the Environmental Advisory Board to provide guidance and advice to the Corps on environmental matters.

In a note to the Clarke family, Lieutenant General Flowers ~~noted that it was fitting that as the Corps moves into the 21~~ century striving to achieve environmental sustainability as the main theme of its environmental operating principles, that it should recognize one of its environmental pioneers by naming an award for him. Lieutenant General Clarke, who died earlier this year, served as Chief of Engineers from 1969 to 1973.

For more information about the awards, contact Dr. William Klesch, CECW-P, at 202-761-4611.

New requirement for transporting hazardous materials

By SANDI ZEBROWSKI
HTRW CX

On May 2, the Research and Special Programs Administration (RSPA) of the Department of Transportation (DOT) published a proposed rule in the Federal Register entitled Hazardous Materials: Security Requirements for Offerors and Transporters of Hazardous Materials. When finalized, the rule is expected to be effective immediately upon publication. There are several requirements that will be placed upon hazardous materials (hazmat) transporters; and one requirement that will be applied to the federal government, as shippers of hazmat.

As a result of the terrorist attacks of September 11, 2001, and subsequent threats related to biological and other hazmat, RSPA has undertaken a broad review of its transportation safety and security programs. RSPA has determined additional requirements are necessary to enhance the security of the transportation of hazmat.

The proposed requirements are:

- Each motor carrier required to register under 49 CFR 107 must maintain a copy of the current certificate on each motor vehicle used to transport hazmat. (The federal government is exempted from the registration requirement as per 49 CFR 107.606, so is not required to register government vehicles. But government contractors, as private, commercial haulers are already required to register and they will have to maintain the certificate in the vehicle.)

- Shipping papers will have to include the hazmat registration number and the names and addresses of both the

consignor and each consignee. The addresses need to be physical street addresses of delivery, not billing addresses. There are some minor exceptions to this requirement.

- Persons required to register and those who arrange for the shipment of infectious material must prepare and implement written plans to assure the security of their shipments. The requirements of the plan are in the proposed rule. Since the federal government is not required to register under DOT regulations, the government drivers will not be required to prepare a security plan, however as commercial motor carriers, government contractors will be preparing these plans as a part of their daily business practice. The plans are not specific to a site, but specific to the company and their practices and procedures.

- RSPA has proposed that within 3 months of the publication of the final rule that ALL HAZMAT employees must receive awareness training of security issues associated with hazmat transportation. RSPA will develop a module that will be placed on their web site. The module will be accessible to anyone and it will be free. So, until a shipper receives recurrent training, it is recommended that the shipper review this module and document that employees received the awareness training of security issues.

If you sign hazmat shipping documents, including hazardous waste or radioactive waste manifests, it is suggested that you review the proposed rule. The entire register can be accessed at <http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dname=2002-register&docid=02-405-filed.pdf>.

If you have questions concerning the new requirements, feel free to contact Sandi Zebrowski at 402-697-2562.

UXO removal at Fort Ritchie reaches one-year anniversary

By MARSHALL HUDSON
Baltimore District

A year ahead of schedule, under budget and with a perfect contractor safety record, Baltimore District's \$7.2 million ordnance and explosives removal project at Fort Ritchie, Md., reached its operational one-year anniversary in June.

Managed by personnel from the District Environmental Remediation Resident Office, the project is cleaning up conventional unexploded ordnance including mortars, light rockets and grenades from former training ranges and areas that were filled by soil from those ranges.

The project's original scope was to remediate 208 of the post's 614 acres. That milestone was expected to be reached by this fall, although the project's final area will probably involve about 260 acres, according to Joseph Brutsman, project engineer. "The project expanded because a 200-foot buffer zone where no ordnance is found is required to ring the entire work area. Every time something is found near the edge of the project, the removal area expands," he said.

Fort Ritchie, located in western Maryland, closed in September 1998 in accordance with the Base Realignment and Closure Act.

Baltimore District has been involved with the Fort Ritchie project since before the post closed. As the planning for the ordnance removal project occurred, the team removed underground storage tanks and cleaned up hazardous, toxic and hazardous wastes at buildings like the photo lab and the motor pool.

"We started with an Archival Search Report; then performed an engineering evaluation and cost analysis and finally did geophysical mapping and data collection to confirm areas that needed to be remediated," said Brutsman. "Some of the records for the post did not exist, and sometime in the post's history a lot of ground was moved to make it more level, putting built up areas over areas once used for training."

The post belongs to the U.S. Army Military District of Washington (MDW) until it is turned over for redevelopment, which is set for 2005.

"Dealing with the Corps has been terrific," said Bill Hofmann, BRAC environmental coordinator for MDW. "All of the Corps people here, and most notably Chris Evans, have really treated us

well as customers. In a word, this experience has been great." Chris Evans is a Project Manager with the Baltimore District.

The Baltimore District has located, excavated and disposed of almost 300 pieces of unexploded ordnance from the site. About 80,000 other metallic anomalies, which turned out to be



A worker uses a Shonstedt 72 series ferrous metal detector to identify anomalies as deep as three meters below the ground surface.

everything from metal fragments, to nails, to magnetic rocks have also been investigated. The excavations were dug to a four-foot depth in areas with potential for re-use and to a one-foot depth on the mountain side. Deed restrictions preventing future unsupervised digging will be placed on the land when it is turned over to the public.

The Army retained about 20 acres of the post for the Maryland National Guard. Remaining acres will eventually go to the PenMar Redevelopment Corporation, a state-created entity whose goal is to maximize economic opportunities for Washington County.

In addition to not knowing exactly where all of the UXO's were, the project has overcome other challenges, including contractor bankruptcy and buy-out, without the schedule being negatively affected.

For more information contact the Baltimore District at 410-962-7536.

Corps of Engineers partners with Nature Conservancy

By MIKE TURNER
Louisville District

The Nature Conservancy first approached the Corps about four years ago about changing the regulation of Green River Lake to benefit a 100-mile stretch below the lake that is rated the fourth highest stream for aquatic biodiversity in the U.S. While initial efforts were underway to identify possible changes in regulation, Congress amended legislation allowing non-government organizations to be local sponsors of Corps

erosion problem along a portion of the riverbank was eliminated through bioengineering methods. (See article in the April 2002 edition of *The Corps Environment* for more information on the Handy Riparian Habitat Restoration Project.)

Concurrently, the USDA Natural Resources Conservation Service and the Nature Conservancy established the Conservation Reserve Enhancement Program (CREP). Local landowners receive payments to restore riparian woodlands and grasslands and place the acreage in conservation easements protecting the river and its tributaries. Both CREP and the Handy Restoration Project received local and regional media attention at a May 30, 2002, dedication attended by Senator Mitch McConnell, Secretary of Agriculture Ann Veneman, Jim Aldrich, Vice President of The Nature Conservancy, the Louisville District Engineer Col. Robert Slockbower and more than 200 local farmers and landowners.

Following this success, on June 21, the Corps gained final approval for a three-year trial to develop, implement and monitor an alternative reservoir regulation plan for Green River Lake with the goal of returning flows and temperatures to pre-project conditions to benefit downstream aquatic ecosystem. No physical changes are apparent nor is there any reduction in flood control provided by the reservoir. This is the first project implemented as part of a joint partnership on the national Sustainable Rivers Project, which gained both local and national media attention on July 9-10. The restoration project, reservoir regulation

through Sustainable Rivers, and CREP have resulted in strong local community support and praise from local, state elected officials, members of Congress, and the Secretary of Agriculture. Equally important is support from the Corps' lake manager and Corps' operators who will make frequent changes in gate operations.

Some concern has been expressed by the Kentucky Department of Fish and Wildlife Resources regarding delayed lake filling in spring and potential impacts on sport fisheries. Sport fishery recruitment will be monitored closely. It is vitally important that the Louisville District and The Nature Conservancy retain support of the Kentucky Department of Fish and Wildlife Resources, license holders, and other recreational users.

The internal and external partnerships and personal relationships that were formed during the Handy Riparian Habitat Restoration Project on the Green River were imperative to the success of this project. Through these bonds, the environmental stewardship of the government agencies, local community and elected government officials has resulted in a triumph for the Corps of Engineers and paved the way for future projects with The Nature Conservancy.

For more information, contact the Louisville Public Affairs Office at 502-315-6900.



Photo by Carol Baternick, Louisville District

Richie Kessler, Nature Conservancy Green River Biosphere Director, has led several expeditions of Corps personnel down the Green River.

environmental restoration projects. The U.S. Fish and Wildlife Service and The Nature Conservancy had already identified the five areas of greatest stress to the aquatic ecosystem of the Green River, one of which had just been purchased by The Nature Conservancy.

The planning process involved Corps personnel (archaeologists, ecologists, engineers, hydrologists, project managers, real estate, financial analysts, and attorneys) representatives from state and Federal agencies, local citizens and elected officials, and staff of The Nature Conservancy. A final plan was completed by the Louisville District and approved by the Great Lakes and Ohio River Division and Corps Headquarters.

The first project in the nation involving a project cooperation agreement between a non-governmental organization, The Nature Conservancy, and the Corps of Engineers was the construction of the Handy Riparian Habitat Restoration Project. This cost-shared project solves the unanticipated impacts of 30 years of operation of a flood control reservoir located 32 miles upstream on the Green River. More than two miles of riparian habitat covering 142 acres were restored and/or protected through reforestation and a permanent conservation easement. Corps construction and contractor personnel made special efforts to limit adverse impacts by suggesting several improvements. A severe

Swords to plowshares - Restoring FUDS in Region 7

By STEVE SCANLON
USAEC, CREO, Versar Inc.

Since the early 1970's, Americans have become increasingly aware of the characteristics and environmental effects of certain compounds and by-products of industrial processes. That, in turn, has focused greater attention on Army, Navy and Air Force facilities that formed the industrial base that sustained the country through wars and other threats to our national security through the 1940's, 50's and even to the present day. A legacy of winning our nation's wars has been the contamination left behind in communities that are not as remote now as they once were.

On May 17, 2002, the Department of Defense took another step toward putting that legacy behind us with the dedication of a groundwater treatment plant at the former Nebraska Ordnance Plant near Mead, Nebraska. The startup of this facility marks the beginning of the long-

term groundwater cleanup effort as part of the U.S. Army Corps of Engineers' commitment to a cleaner environment for the former ordnance plant area.

The Nebraska Ordnance Plant once comprised 17,000-acres. The facility operated four bomb-loading lines from 1942 to 1956 for World War II and the Korean War. In addition, the plant was used by the Army for munitions storage and ammonium nitrate production. The Air Force built and maintained three Atlas missile silos at the facility from 1959 to 1964. Some of the processes associated with these activities used organic solvents.

Beginning in 1962, portions of the plant were sold to various entities. Today, the major production area of the former plant (approximately 9,000 acres) belongs to the University of Nebraska, and is used as an agricultural research station. The Nebraska National Guard and numerous individuals and corporations own the remaining acreage.

The groundwater treatment plant at Operable Unit 2 (OU2) is designed to treat 3,000 gallons per minute of water contaminated with Royal Dutch Explosive and trichloroethylene. The new treatment facility removes these contaminants from 4 million gallons of water daily by filtering the water through granular activated carbon. Treated water is available for beneficial reuse primarily for agricultural irrigation.

Both the Omaha and Kansas City Districts of the Corps have responsibility for various aspects of OU2. The Omaha District was responsible for the design and construction of the treatment plant, while the Kansas City District manages the Long Term Operation and Maintenance of the plant.

Steve Scanlon is the Army Regional Environmental Coordinator for Region 7. For more information, contact the Central Regional Environmental Office at 816-983-3451.

Corps constructs well house

Kinross receives best drinking water award

By KIMBERLEE TURNER
Louisville District

The Kinross Township Department of Public Works recently received the American Water Works Association Award for the Best Drinking Water in the Upper Peninsula, beating 14 other entries.

Since 1988, the Corps has been conducting an environmental investigation at the former Kincheloe Air Force Base in Kinross, Mich. In 1993, low-levels of trichloroethylene (TCE) were detected in two of the four Township's municipal wells and led to one of the wells being disconnected. The Township voiced concerns about the TCE reaching the other wells serving as



their primary source of water.

In October 1999, the Corps, through its contractor, Montgomery Watson Harza, completed construction of a new well house, which included two new wells each 220 feet deep. The wells now serve as the primary source of drinking water for over 6,500 residents. The two wells, known as Township Wells 6 and 7 are capable of

producing 900 gallons per minute when operating at capacity. The Corps also upgraded another well to assure the community a greater supply of quality

drinking water. The water supply has received accolades for its good taste, due to the fact that it's naturally soft, has virtually no iron and does not require chlorination. In April 2001, the well house was transferred to the Kinross Township Department of Public Works.

To promote the Upper Peninsula's best drinking water and the work being accomplished by the Corps, the Louisville District and contractor, Montgomery Watson Harza, a reception was held at the Kinross-Kincheloe Air Force Base Reunion on July 18. Samples of the Kinross Township's water were distributed along with information about the ongoing environmental investigation of this formerly used defense site. Over 400 veterans and their families attended the weekend celebration.

For more information, contact the Louisville District Public Affairs Office at 502-315-6835.

Conference focuses on balancing economy with environment

More than 350 water resource professionals attended the Balancing Economy and Environment conference July 16-18 in New Orleans.

This was the first-ever joint conference for economists and environmental specialists in the U.S. Army Corps of Engineers Civil Works program. It provided a forum to discuss current economic and environmental issues and ideas related to the Corps mission areas, with special emphasis on the recently released Environmental Operating Principles and environmental sustainability. This topic drew many Corps water resource professionals and others from outside agencies such as the National Academy of Sciences, Ducks Unlimited, The Nature Conservancy, the National Audubon Society, MARC2000, Harris County Flood Control District and many universities. One of the major goals of the conference was to facilitate interaction among the economists, environmental scientists and engineers.

Maj. Gen. Robert Griffin, Director of Civil Works, set the stage for change as he presented leadership perspectives on balancing economy and the environment. Unquestionably, the message was that the Corps' Environmental Operating Principles will be embodied in all Civil Works studies, plans, project designs, and operating plans to achieve a balancing of economy and the environment throughout their life cycles.

The conference presentations are available at <http://www.usace.army.mil/civilworks/cecwp/eande2002/>.

Of particular interest to *The Corps Environment* readers were presentations by USACE districts on specific restoration projects that they had constructed, which ranged from remediation of acid mine drainage to island creation and wetland establishment along coastal Louisiana to the Everglades restoration. There also were sessions on new developments in environmental restoration policy including how to value environmental benefits, how to account for the ecological uncertainties, and how to balance these potential benefit streams to achieve environmental sustainability.

Presenters were encouraged to consider the full range of Corps activities including problem identification, plan formulation and evaluation, engineering and construction, operations and maintenance, and adaptive management and monitoring.

The conference was an opportunity to witness the Corps shifting from formulating single purpose projects to formulating actions that contribute to both the economy and the environment. Once more, the Corps is positioning itself to demonstrate the Army's commitment to economic and environmental sustainability.

For more information contact the conference co-chairs: Bruce Carlson at 202-761-4230 or Mark Colosimo at 202-761-4250.

NY District engineer receives Heartland Award

By JOANN CASTAGNA
New York District

Mark Kucera of the New York District received the Heartland Award in January for his outstanding leadership on the Reynolds Metals Superfund Project. The Heartland Award, given by the Kansas City District, honors outstanding accomplishments by personnel outside the Kansas City District.

The Reynolds Metals Superfund Site is one of the EPA's critical environmental cleanup projects located in Massena, N.Y. at a facility once owned by the Reynolds Aluminum Wrap Company. During the 1980's the EPA discovered that as a result of the facility's production activities, various types of industrial waste, including primarily Polychlorinated Biphenyls (PCBs), were being discharged into the St. Lawrence River.

The EPA decided that the river needed to be dredged and the material capped; otherwise, this would pose an environmental and public health risk to surrounding businesses and communities.

"The project team includes EPA Region II; the State of New York, Alcoa (Reynolds); the Mohawk community; several U.S. Army Corps of Engineer Districts including New York, Kansas City, Buffalo and Detroit; and TAMS Consultants," said Josephine Newton-Lund, Project Manager, Kansas City District.

The project is managed by the Corps' Kansas City District, which supports all of EPA Region II's environmental cleanup efforts. Kucera, a 20-year Civil Engineer with the New York

District, was selected from the list of candidates to lead the project. "Since this was a Superfund project done under EPA's authority and involved dredging of hazardous material, I was looking for someone with both Hazardous, Toxic and Radioactive Waste and dredging experience. Mark had extensive Superfund experience and was familiar with and well respected by the EPA as well as Kansas City District," said Donald Braun, Project Engineer, New York District.

The Corps' responsibility for the superfund project was to provide 24-hour oversight of the clean-up operation that was performed by contractors hired by the Reynolds Metals Corporation. "The EPA wanted a full-time presence on the federal level," said Kucera. "I was the senior full-time federal government representative on site. With the Corps' experience involving dredging, environmental work and construction management, we were an easy choice. My role was to verify the remediation work was being performed in compliance with the approved work plans and keep coordination with all the various agencies under control.

"I enjoyed the complexity of the project," said Kucera. "We had what was reported as the largest dredging fleet on the Great Lakes/St. Lawrence Seaway."

Reynolds (Alcoa) has spent approximately \$47 million to clean up the site and the first phase was completed in early November, 2001. According to Kucera, the construction is ongoing.

For more information contact the New York District Public Affairs Office at 212-264-1230. The web site for the Reynolds Metals Superfund Project is www.slrrp.com.

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FY2003 PROSPECT COURSES

A wide variety of technical and professional development courses are available through the USACE Proponent Sponsored Engineer Corps Training (PROSPECT) Program. Information about the FY03 program can be found online at: <http://pdsc.usace.army.mil>. This web site contains information on the classroom program as well as on the distance learning program.

To register for any of these courses, first discuss this with your supervisor and then contact your local training coordinator. Your training coordinator can guide you through the registration process and inform you of any deadlines applicable in your organization as well as all local procedures that you must follow to register.

PROSPECT courses are open primarily for Corps of Engineers personnel. Government personnel from other agencies (federal, state, or local), however, may take PROSPECT courses on a space available basis.

For further information, contact John Buckley at 256-895-7431 or email at John.P.Buckley@HND01.usace.army.mil.

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