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Environment

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Corps cleans up New Jersey creosote site

By JOANNE CASTAGNA, *New York District*

In 1996, Claremont housing development residents in Manville, N.J., reported a black oil-like substance discharging from sump pumps. The substance was later found in their soil. The New Jersey Department of Environmental Protection (NJDEP) investigated in 1997, and identified the substance as polycyclic aromatic hydrocarbon (creosote). Creosote is a preservative used to treat wood and is a probable human carcinogen.

Claremont Development is a 50-acre residential and commercial community resting on the property of a former American/Federal Creosote Wood Treatment Facility. The facility closed in the late 1950's. Portions of the land were developed into commercial and retail property, including the Rustic Acres Mall and 137 single-family homes. Before the Claremont Development was built, the creosote facility was removed and its canals and lagoons with creosote sludge were covered with a few feet of soil.

NJDEP recognized the magnitude of the problem and requested assistance from the U.S. Environmental Protection Agency's (EPA) Region II. EPA conducted soil borings at the site and in surrounding properties, and discovered creosote in 19 residential properties as well as area canals and lagoons. Contamination was extensive and uncontrolled, impacting sediment, soil, and groundwater and posing health risks to residents. They also found canal and lagoon areas were the major sources of soil and groundwater contamination, and called for excavating and disposal of contaminated material.

In 2000, EPA requested help from the U.S. Army Corps of Engineers (Corps). "The size and nature of this project provided an opportunity for an inter-district team to execute the work," said Mike Scarano, North Atlantic Division Corps of Engineers. Scarano assembled an inter-district team with specialists from five Corps districts and two divisions. Each district played a critical role on this team. New York District led the Remedial Action Phase with the help of Philadelphia District. Omaha District managed cost-reimbursable contracts, Baltimore District handled key real estate services, and



U.S. Army Photo, New York District

Federal Creosote Team:

(L to R) JoAnne Castagna, Neal Kolb, Michael Scarano, Gene Urbanik, Rich Puvogel, Rich Gajdek, Matthew Ludwig, Brian Duffy. Not pictured: Todd Daniels, Christine Milligan and Mark Herse.

Kansas City District was in charge of Remedial Design/Technical Assistance.

Current work includes remediation of Lagoon B, demolishing and removing nine homes, asbestos abatement, backfill and cover of basements, and building a retaining system to support the sidewall of the lagoon excavation. Other work includes a wastewater treatment plant to remove creosote from the groundwater, and excavating and transporting creosote-contaminated material to disposal facilities.

The government purchased 17 homes and relocated the residents with all their expenses paid as part of the Remedial Action phase. Extensive safety procedures are in place to protect the health of people in and near the housing development.

"Because of the great support from all team members," said Scarano, "EPA Region II has been satisfied with the project."

The project still has several more phases to complete and is expected to cost more than \$100 million. Lagoon A remediation will begin after Lagoon B is completed this month. The project should be complete by 2006.

For more information contact JoAnne Castagna, Programs and Project Management Division, New York District at 212-264-1230.

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The Corps

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Study complete on coexistence of woodpecker and military

By DANA FINNEY
USACERL

A study completed by the U.S. Army Engineer Research and Development Center (ERDC) provides the first credible evidence that military training noise and the Red-Cockaded Woodpecker can successfully coexist. With funding from the Strategic Environmental Research and Development program, researchers at ERDC's Construction Engineering Research Laboratory (CERL) designed and carried out a rigorous three-year experiment that assessed the red-cockaded woodpecker's reaction to a range of noise events, including small arms, artillery, armor, helicopter, and maneuver noise.

The study documented the woodpecker's immediate response (flush from the nest) and individual fitness indicators such as reproductive success during specific noise exposures. To determine the range of the bird's normal behavior and hearing, baseline behavior, hearing range, and sensitivity were established for undisturbed groups. The experiment began with an assumption that if noise caused the birds to react by frequent flushing from the nest, it could lead to a reduced overall fitness



Red-cockaded woodpecker.

U.S. Army Photo, USACERL

(survival and reproductive success). Such a result would suggest possible changes in the population viability.

The project found that the woodpecker successfully accommodates the military noise.

While the frequency of flushing increased proportionately with nearness and volume of noise, all birds returned to the nests within 12 minutes. Noise exposure did not produce any mortality or statistically detectable changes in reproductive success.

Results of the study will be used to help the Army work with the U.S. Fish and Wildlife Service to develop realistic guidance for military training in areas containing woodpecker's habitats. Severe restrictions had been placed on installations in the southeastern U.S. during the early 1990's due to the lack of valid information about training impacts on the species.

The new study could effectively remove or reduce training restrictions related to noise.

For more information, contact Dr. Larry Pater at CERL, 217-373-7253, Larry.L.Pater@erdc.usace.army.mil. To read a related article, see the summer 2001 issue of the SERDP Information Bulletin at www.serdp.com/general/publications.

Hawes receives Wildlife Federation award

By the PUBLIC AFFAIRS OFFICE
New Orleans District

New Orleans District employee Suzanne Hawes was honored on March 2 with the Louisiana Wildlife Federation's Governor's Award. The award is presented annually from nominations submitted by the public, to the person or organization deemed to have made the most outstanding contribution toward the protection and wise use of the state's natural resources during the previous year.

Hawes received the award at the 38th Conservation Achievement Recognition Banquet held in Marksville, La. Hawes was cited for leadership in coordinating the state and federal effort to understand and remedy the massive marsh dieback along

the Louisiana coast and for her commitment to the environment that has helped her bring a conservation ethic to the Corps. "Over her 30-year career, she has become the environmental conscience of the district," said James Addison, Public Affairs Officer for the New Orleans District.

"Hawes has been the bridge between the conservation community and the Corps, and just as important, the bridge between each district commander — a critical role in keeping the momentum on long-term efforts like coastal restoration and the conservation and recreation program for the Atchafalaya Basin," said Addison.

For more information on Hawes, contact James Addison, New Orleans District Public Affairs, at 504-862-2201.

St. Paul District biologist volunteers to save the Kinni

By SHANNON BAUER
St. Paul District

Oak savannah, white pine forest, wooded coulees and sedge meadows frame the cold and fast-flowing 22-mile long Kinnickinnic River located about 35 minutes from the St. Paul District office in western Wisconsin.

Nicknamed the 'Kinni' by its neighbors, it's a favorite among Midwestern fly fishermen as one of the most productive natural trout fisheries in the region producing both brook and brown trout. More than 40 state-listed endangered and threatened species call the Kinni watershed home.

The Kinni is endangered from all sides, with Twin Cities on the west, Eau Claire, Wis., on the east, and River Falls, Wis., on the north. Residential development, storm water run-off, agriculture pollution and streambank erosion all threaten the health of the natural resource.

St. Paul District fisheries and biologist Dan Wilcox spends much of his off-duty time preserving this river and its quality. Six years ago, Wilcox, a River Falls area resident and project manager, teamed with 11 of his neighbors to form the Kinnickinnic River Land Trust, a nonprofit land conservation group dedicated to defending the Kinni and its watershed. Since then, the land trust has safeguarded more than 1,100 acres and recruited around 500 members from across the nation. Its creation inspired the formation of several more land trusts in western Wisconsin.

"The Kinnickinnic is a real beautiful river with many unique qualities. It's really important to the community," said Wilcox. "We wanted to see it protected from development that's caused many streams elsewhere to deteriorate."

Wilcox, who's continued to serve on the board since its inception, said the board was designed to operate in several ways. "We take donations of and purchase conservation easements, as well as purchase land out right," he said. "Additionally, the land trust enters into management agreements with land owners to protect the quality of the land. We do a lot of educating in the community about the river and the watershed and participate in monitoring the river."

Wilcox has worked for the Corps on fisheries and water quality for 23 years, both in the Savannah and St. Paul districts. He said his Corps work and his volunteer experiences complement each other.

Besides serving as a board member, his contributions to the Kinnickinnic River Land Trust include attending local government meetings to help promote better watershed management, cleaning up the river

each year, conducting vegetation surveys, developing a computer geographic information system for the Kinnickinnic watershed and taking students and other interested parties on canoe trips to explain the ecology of the river and help them understand land trust management.

One of his bigger projects for the Kinni included developing a management plan for Kelly Creek, which is a spring tributary of the river and an important spawning area for brook trout. The land trust purchased the 25 acres through which Kelly Creek flows, so the public could do hands-on conservation work as well as enjoy its beauty. Teachers can also use the area for education.

Wilcox also participated in burning brush at the site and helped plant native prairie and oak savannah to restore the original flora of the area.

"Dan is invaluable to us, because he's the only professional ecologist on board," said Rick McMonagle, executive director of the land trust and a neighbor of Wilcox. "He brings lots of contacts, resources and knowledge.

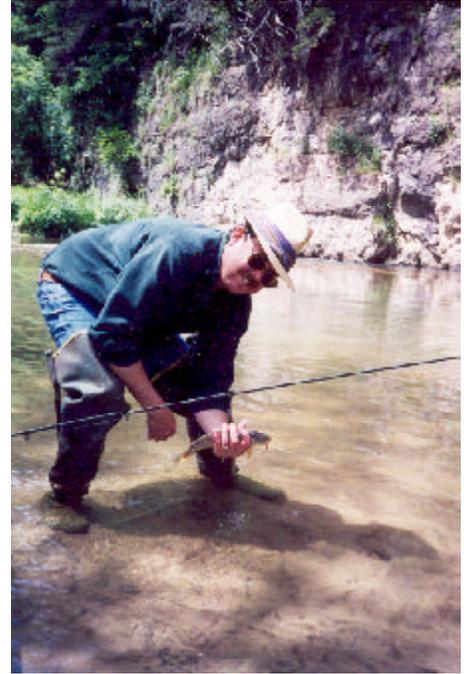
"But on a personal side, he knows this river," he continued. "He canoes, he fishes, and he hunts. He spends a lot of time out there on the water."

The land trust raises funds through membership donations, grants and government programs. In some of the land trust's management agreements, they partner with groups like Pheasant's Forever, Trout Unlimited and the Wisconsin Department of Natural Resources.

"I've gotten to know a lot of people as a result of my participation in the land trust," said Wilcox. "I've learned how nonprofit organizations operate, and I've learned a lot from other board members."

He says his biggest reward is "leaving a great legacy that will become increasingly more valuable over time. I've come to appreciate that river and other rivers a lot more. Through our land protection efforts, too, I now have a place to go fishing and run my dog."

For more information, contact Shannon Bauer, St. Paul District, at 651-290-5108.



Dan Wilcox, St. Paul District biologist.

U.S. Army Photo, St. Paul District

UXO disposal assistance

Huntsville Center provides Donovan Chamber to clean up leftover World War I explosives in Belgium

By CHARLES L. TWING
Huntsville Center

At the request of the Office of Deputy Assistant Secretary of the Army, Environment, Safety and Occupational Health Division, the Huntsville Center Recovered Chemical Warfare Materiel Team (RCWM) has been providing assistance to the Belgian Royal Military Academy as it cleans up unexploded ordnance (UXO) from World War I.

Belgium was one of the major areas of combat during the First World War. For the entire four years of the war, the front line extended from the North Sea to the Swiss border across Belgium and France. There were approximately 1.4 billion rounds of artillery fired during World War I. Because the land was so wet and muddy, artillery rounds with paper train time fuses and point detonating fuses often failed to function.

During World War I, along the western front at Chemin des Dames, France, more than 11 million artillery shells were dropped on the Germans by the French in a failed counter-attack. More than 700,000 German bombs fell on the French sixth army on May 27, 1918. These are just two examples of the amount of munitions dumped on the area.

When Belgium again came under German control during the Second World War, more battle debris continued to pile up, although not as voluminous as World War I.

Belgium continues to have a serious unexploded munitions problem. Shortly after World War II, sea dumping became the accepted and cheapest method of disposing of unwanted munitions. That practice continued until the early 1970's. The Belgian Military then began stockpiling UXO while searching for a solution to their disposal problem.

In 2000, Belgium had 4,000 munitions items found by farmers, construction workers, hikers, and other civilians. Approximately 5 percent were filled with some type of RCWM. For a small country, that is a lot of munitions to destroy.

At the Explosive Disposal Facility at Poelkapelle, Belgium, the Belgian military had been drilling and draining the contents of munitions. They stockpiled the unexploded RCWM ordnance. The agent was drained into vats of neutralizing agent. Once neutralized, all remaining chemicals except arsenical-based agents were taken to a commercial incinerator and burned. Since arsenic is a base element and does not burn, anything that contained arsenic was stockpiled until an alternate solution was found.

The Belgian Ministry of Defense tasked the Belgian Royal Military Academy (RMA) to find a faster, safer, and cheaper method of disposal. The RMA tried and rejected many systems, mostly due to cost.

That all changed when Professor Michel Leferve' and Dr. Herbert de Bischof of the RMA discovered a disposal system under contract with the Engineering and Support Center, Huntsville, with potential to destroy chemical weapons.

During a meeting in Brussels at the RMA attended by Huntsville Center, the contractor, Demil International, Inc., representatives of the Edgewood Chemical Biological Center (ECBC), and a representative of the Office of the Deputy Assistant Secretary of the Army (Environment, Safety, and Occupational Health) (DASA-ESOH), the Ministry of Defense officially requested U.S. Army support for the testing of the Demil Controlled Detonation Chamber (Donovan Chamber) against RCWM. The Donovan Chamber is designed to completely contain a detonation while preventing any discharge of blast produced gases to the atmosphere. The DASA-ESOH agreed to provide the requested support.

A test plan was developed by the RMA, Huntsville Center, and ECBC, and a Donovan Chamber was sent to Belgium in April 2001. The first week of testing was done with seven high explosive rounds and seven Belgian sheet explosives. They were followed by 18 7.7 cm Mustard rounds, 29 7.7 cm Phosgene rounds, 37 7.7 cm Clarks rounds and eight 60 mm White Phosphorus mortar rounds. Most rounds were destroyed with high temperature/high oxidizing commercial U.S. sheet explosives.

A Belgian Explosive Ordnance Disposal (EOD) technician and a Demil International explosives handler, and a Belgian Warrant Officer, serving as the Safety Officer, conducted the test. Huntsville Center maintained safety oversight. The RMA was responsible for conducting air monitoring and sample collection. ECBC conducted air monitoring and sample analysis. Belgian EOD provided the

facilities and personal protective equipment. Testing ended in July 2001.

The Belgian Ministry of Defense and the RMA declared the test a complete success. The data collected was sufficient that the DASA-ESOH decided on further testing of the equipment for use against RCWM in the U.S. Tests were completed in May 2002.

For more information contact Charles Twing, Recovered Chemical Warfare Materiel Team Leader, at 256-895-1543.



Belgian farmers put ordnance found in their fields in utility poles for EOD teams to retrieve.

U.S. Army Photo, Huntsville Center

Corps offers children safety awareness training about former military ranges in Tennessee

By JEAN PAVLOV
Huntsville District

Members of the Huntsville Center are currently conducting a Safety and Awareness program in six counties in Tennessee. Initiated in January 2002, the program includes visits to county elementary, middle and high schools. It is expected to be completed this year.

The Safety Awareness Outreach Program was implemented to educate the public about possible explosive ordnance remaining near two Formerly Used Defense Sites (FUDS) in Tennessee. The sites are the Spencer Range in Van Buren, Warren, Sequatchie and Bledsoe Counties and the Motlow Range in Coffee and Moore Counties, both formerly part of Camp Forrest. In the 1940's, anti-aircraft, anti-tank and machine gun ranges were located at the sites, with firing ranges for 37 mm weapons, mortars, rockets, and small arms.

Department of Defense identified and removed ordnance at the sites in the past prior to releasing the areas; however, throughout the years, ordnance items have moved closer to the surface as a result of erosion, frost heave, timber farming, land clearing, construction activities, etc. Remaining items may consist of a fuse, shell, or mortar round, which can be extremely dangerous if handled.

Training consists of an age appropriate ordnance safety video and a presentation by a Huntsville Center Ordnance and Explosives Safety Specialist using inert ordnance items similar to those found in the area. A follow-up question and answer session follows the presentation.

In January, more than 800 children, grades kindergarten through 12, attended the initial safety presentation in Spencer, Tenn. Ordnance safety awareness training was also conducted in May for 6,000 students at schools throughout the Tullahoma, Tenn. area, are to inform students about the former Motlow Range. Students received a water bottle, mouse pad, pens, coloring books, magnets, key chains and safety stickers as well as an informational brochure containing ordnance safety warnings and procedures to follow if ordnance items were found.

A multi-page newspaper insert containing

basic site history and an ordnance safety warning was distributed locally to inform the general public about unexploded ordnance.

The FUDS program receives approximately \$200 million annually in the budget allocation from Congress, with approximately \$2.0- \$2.8 million going to fund work in the states of Alabama, Mississippi, and Tennessee.

The U.S. Army Corps of Engineers and other agencies are concerned and committed to helping protect the communities and families in the Spencer and Tullahoma areas. The Safety Awareness Outreach Program focuses on recognition of potential ordnance items, avoidance of those items, notification to report the location, and help from the community to inform others about the former military ranges. The program ultimately prevents accidents.



U.S. Army Photo, Huntsville Center

Fred Allan, OE Safety specialist, explains ordnance dangers to Spencer Elementary School students.

Team members conducting the briefings are Karl Blankenship, Fred Allan and Bill Stephenson from Ordnance and Explosives Directorate, Dan Plugge from Engineering Directorate, Geotech Branch, and Jean Pavlov from the Public Affairs Office.

For more information on the Safety Awareness Outreach program in Tenn., contact Bill Stephenson at 256-895-1175. Life-cycle program manager is Charles Colbert, Mobile District 251-690-3209.

Corps partners with EPA to promote “Triad”

By **CHERYL GROENJES**
HTRW-CX

The U.S. Army Corps of Engineers Innovative Technology Advocate (ITA) Program is partnering with the U.S. Environmental Protection Agency (EPA) on several initiatives to promote more efficient execution of environmental cleanups. A workgroup includes representatives from Alaska, Baltimore, Kansas City, Omaha, Sacramento, Savannah, Seattle, and Tulsa Districts, the Engineering and Support Center, Huntsville, and the Hazardous, Toxic and Radioactive Waste Center of Expertise.

The Corps’ ITA Program promotes and facilitates the consideration and use of innovative site characterization and remediation technologies by technology information exchange. The “Triad” is a process that integrates systematic planning, dynamic work plans, and field analytical technologies in a concerted manner to manage overall decision quality and project uncertainties. Initiatives include developing web-based tools to educate practitioners on innovative sampling and analytical technologies available, and provide interactive training on a variety of environmental-related topics.

The Field Analytics Technology Encyclopedia (FATE) is an online encyclopedia developed jointly by the EPA and the Corps. FATE includes up-to-date information about technologies that can support environmental monitoring during all project phases. When employed, these technologies increase the number of data points available to support project decisions.

FATE is an easy-to-use resource that provides a wealth of information including text, photographs, diagrams for various sampling and field-based analytical technologies, and useful links to additional resources on the subject. Technology categories are geophysics, delivery systems, sampling, and analytics.

For each technology, information is included on: Technology Description; Typical Uses; Theory of Operation; System Components; Mode of Operation; Performance Specifications; Advantages and Limitations; Cost Data; Additional Resources; Documented Use; and Verification and Evaluation Reports.

The Corps is also assisting EPA’s review of new and existing FATE modules. Input on draft modules, available online soon include: Magnetics for Environmental Applications, Direct Push Soil, Soil Gas and Groundwater Samplers, and Geotechnical Sensors, and Passive Diffusion Samplers.

The EPA Technology Innovation Office (TIO) website, called CLU-IN, hosts an ongoing series of internet seminars covering a wide variety of technical subjects. The web-based slide presentations have a companion audio portion, which provides an interactive training opportunity at no cost. The schedule for upcoming seminars is posted on CLU-IN, along with registration information. If the live offerings are not convenient, one may download and view archived seminars and their transcripts.

The Corps has collaborated with the EPA-TIO on several seminars including: Dynamic Data Collection Strategy Using Systematic Planning and Innovative Field-Based Measurement Technologies, Field-based Analytical Methods for Explosives Compounds, Modernizing Site Cleanup: Managing Decision Uncertainties Using the Triad Approach, and Remediation System Evaluations and Optimization of Pump and Treat Projects.

Tools currently under development by or with the Triad Workgroup include: Web-based Project Managers Triad Handbook, Superfund Guidance on the Use of Field Analytics to Support Onsite Decision-Making, Procurement Guide for Application and Implementation of the Triad Process, and Update Field-Based Site Characterization Technologies Course. Compiling an inventory of Corps projects that use field analytics and developing a Corps-wide network of technical expertise on the use of specific field analytical technologies are also under development.

Cooperation between the Corps and EPA benefits both by promoting the use of sound science, the right tools, and educating practitioners on how to establish and attain environmental stewardship goals.

For more information on the Triad, contact Cheryl Groenjes at the Corps HTRW-CX at 402-697-2568.

DoD recognizes Corps employees for data collection improvements

The Department of Defense has recognized three U.S. Army Corps of Engineers employees for their efforts to improve the efficiency and effectiveness of environmental data collection activities.

Kevin Coats and Cheryl Groenjes of the Corps Hazardous, Toxic and Radioactive Waste Center of Expertise in Omaha and Dr. David Koran of the Headquarters Corps Environmental Division were members of the DoD Environmental Data Quality Workgroup (EDQW), which received a special 2001 Secretary of Defense Environmental Award on May 1. E. C. “Pete” Aldridge, Under Secretary of Defense (Acquisition, Technology and Logistics) presented the “Special Recognition Award,” which has been given only twice.

The 24-member joint services team has been working together for five years to improve the efficiency and effectiveness of the data collection activities and to enhance the quality and reliability of data used to make environmental decisions. The award noted that the group efforts “... will accelerate the process for bringing the

Department’s environmental problems to successful closure and free up much-needed resources for training and operational readiness.”

“I think the EDQW efforts have created an atmosphere that has helped members of the individual branches share their ideas based on technical merit with less political influences; creating a unified approach that goes beyond the separate branches’ current guidance,” Cheryl Groenjes said.

“It felt good to be a part of an effort that is not only succeeding, but being recognized for the effort,” David Koran said, adding that he expects the group to continue its work with an eye toward tackling standardization of data deliverables from analytical laboratories to reduce costs and develop off-the-shelf software.

Kevin Coats said he felt honored to not only see the group receive the award, but to have been asked to be part of the group five years ago because of the project’s importance to DoD. He, too, expects that the group will tackle other issues because of the framework that has been established.

Corps reveals draft plan to revive endangered mussel species

NEWS RELEASE

St. Paul District

The U.S. Army Corps of Engineers, St. Paul District, released its draft plan to establish new populations of the native, endangered Higgins' eye pearly mussel in the Upper Mississippi River on April 15.

This long-term solution to the survival of the Higgins' eye is being coordinated in cooperation with the U.S. Fish and Wildlife Service; the U.S. Geological Survey; the National Park Service; the U.S. Coast Guard; the departments of natural resources from Iowa, Illinois, Minnesota and Wisconsin; and the Science Museum of Minnesota. It involves establishing new populations, through relocation, of the Higgins' eye. The Corps is also conducting a separate study for the long-term population control of the zebra mussel.

The Corps' \$2.4 million plan took two years to develop. It stems from an April 2000 Fish and Wildlife report that said continued operation of the nine-foot navigation channel on the Upper Mississippi River system would likely jeopardize the continued existence of the Higgins' eye.

"Due to the upstream transport by commercial barges and recreational craft, the Asian native zebra mussels are now found in the Mississippi River. These zebra mussels have an adverse impact on the Higgins' eye and other native freshwater mussels,"

said Dennis Anderson, USACE biologist and project manager. "They cover the native mussels completely, so the native mussels can't open up and they die."

The Corps will establish 10 Higgins' eye relocation sites to ensure at least five new populations survive. Specific sites have not been determined but potential locations include the Rock and Kankakee rivers in Illinois; the Iowa, Cedar, Des Moines, Upper Iowa, Turkey and Wapsipinicon rivers in Iowa; the Wisconsin, Chippewa and Black rivers in Wisconsin; from the head of the navigation to Monticello, Minn.; pools 1 through upper 4 and pool 24 on the Upper Mississippi; and the first 30 miles of the St. Croix River above Taylors Falls, Minn.

The relocation efforts involve collecting adult Higgins' eye from areas heavily infested with zebra mussels and cleaning and moving them to areas of minimal or no zebra mussels. It will also include raising juvenile mussels on host fish species and at hatcheries with subsequent stocking at the relocation sites.

The final plan was completed in June. The complete draft plan can be found at www.mvp.usace.army.mil or obtained by calling Anderson at 651-290-5272.

For more information, contact Shannon Bauer at 651-290-5108, or see www.mvp.usace.army.mil/news_media/news/pa-2002-0046.htm

Corps employee on environmental committee

By DONNA SHEPARD

San Francisco District

Scott Nicholson, Program Manager of the Hamilton Wetlands Restoration Project was recently selected for a temporary Congressional assignment with the House Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment.

Nicholson reported to Washington in early March and will work throughout the remainder of the Congressional session with other committee staff for the development and passage of a Water Resources Development Act.

During the assignment, Nicholson will review project and policy proposals and make recommendations concerning their inclusion in a House bill to senior staff and Congressional members. He will negotiate with representatives of the Senate and the Administration to develop a final supportable bill; assist in the preparation of subcommittee and committee hearings and markup, including development of briefing



Scott Nicholson

materials for members; and communicate with Congressional offices, the Corps and other agencies to share appropriate information on issues related to the committee's jurisdiction.

Nicholson holds three master's degrees from the University of California, Berkeley, in Civil Engineering, Landscape Architecture and Environmental Planning, and City and Regional Planning. He has been a Program Manager at the Corps San Francisco District since 1999.

For additional information, contact Donna Shepard, San Francisco Public Affairs Office, at 415-977-8658.

Memphis District biologists study safer diving

By **JIM POGUE**
Memphis District

With the goal of achieving environmental compliance in the safest and most cost-effective manner, four Memphis District biologists recently received Scuba Working Diver Safety and Supervision Training at Florida Keys Community College in



U.S. Army Photo, Memphis District

Pictured are two examples of fat pocketbook (*Potamilus capax*), an endangered freshwater mussel found in the St.

Key West, Fla., one of the nation's premier dive training providers. The two-week Army Corps of Engineers approved course certified Mark Smith, Joe Hockmuth, Danny Ward and John Rumancik in safe scuba and snorkeling techniques. Corps Headquarters Safety Office recommended the training for the district divers.

Smith said "The course included advanced scuba and snorkeling skills, rescue techniques and drills, oxygen provider and dive supervisor training. The training helps fulfill requirements for Memphis District biologists to conduct preliminary mussel surveys using masks and snorkels."

District area waterways, particularly Arkansas' White River, St. Francis River and its tributaries and ditches, contain significant freshwater mussel populations. Several of the mussels, the scaleshell, fat pocketbook and pink mucket, are threatened or endangered species. In order to fulfill the requirements of the Endangered Species Act, the District conducts surveys to determine the presence or absence of endangered freshwater mussels in maintenance and new construction project areas within the District. Memphis District divers only snorkel when they search for mussels.

"By allowing Corps personnel to conduct surveys we are able to realize substantial savings in project costs,"

Hockmuth said. "This training will allow the district to have 'on-demand' results for the presence or absence of endangered mussels." Cost savings to the district can be as much as \$15,000 per survey. Last year the team conducted more than 15 surveys with an estimated cost savings of more than \$100,000.

If no endangered mussels are found, Fish and Wildlife Service officials can provide Endangered Species Act clearance permitting construction or maintenance projects to proceed without further investigation or mitigation efforts. This "out front" approach to the process can speed environmental clearances by months and can eliminate the need for additional work.

Because the waterways Memphis District divers check carry a great deal of silt, visibility is typically at or near zero. The only way the divers can check for the presence of the endangered mussels is by running their hands along the bottom. Debris can be a problem for divers as they feel along the silt, sand and gravel that covers the river bottoms. "I wear gloves because we find lots of broken glass, fishhooks from abandoned trotlines and plenty of other junk," Smith said. Additionally, cottonmouth snakes, other aggressive water snakes and even poison ivy are other perils the divers regularly encounter as they seek endangered mussel populations. According to Smith, the dive safety training gave the divers much more confidence in their ability to evaluate potentially dangerous situations and to operate safely in that environment.

For more information on the diving program at the Memphis District, contact Jim Pogue, Memphis District Public Affairs Office, 901-544-4109.



U.S. Army Photo, Memphis District

Mark Smith (with mask) and Jason Phillips from the U.S. Fish and Wildlife Service identify and count mussels on 15-Mile Bayou, a tributary of eastern Arkansas' St. Francis River.

Integrating Conceptual Site Models for OE and HTRW projects

By JOHN SIKES, *OE-CX and*
HEIDI NOVOTNY, *HTRW-CX*

For almost two years, the Ordnance and Explosives (OE) Center of Expertise (CX) and the Hazardous, Toxic, and Radioactive Waste (HTRW) Center of Expertise have been working together to define Conceptual Site Models (CSMs) and how they are used. An engineering pamphlet has been drafted about the subject and is scheduled for publication later this year.

The pamphlet explains CSMs and describes developing a CSM for an OE project, developing a CSM for an HTRW project, and integrating OE and HTRW CSMs.

CSMs are used during the Technical Project Planning (TPP) process. Simply put, a CSM is a description of a particular site and its environment based on existing knowledge. A CSM can be developed for any type of project. A simple map showing the location and boundaries of the site might be the initial CSM for a site. But OE and HTRW sites are not that simple, and other information such as ecological and geological data must be gathered and represented. Past, current, and future land use must be described and the possible locations of potential ordnance presence and HTRW contamina-

tion must be added.

Most often, the CSM is a combination of maps, drawings, photographs and text. The CSM is a site-specific tool continually updated as new information is gathered. The CSM *is not* a “programmatic” model taken from site to site to input standard data and get specific answers. The project delivery team (PDT) uses the CSM as a communication tool, to define areas of responsibility, to define characterization approaches and to exchange data sets.

The basic purpose of a CSM is to describe sources, pathways, and receptors for both OE and HTRW concerns. It assists the PDT in their planning of project activities. One of the most powerful aspects of a good CSM is its ability to assist the PDT in communicating with team members including regulators, stakeholders and the public.

Why should OE and HTRW projects be integrated? There is a site-specific relationship between OE and HTRW even though they present fundamentally different kinds of hazards and risks and require different skills and resources to address. A CSM provides the mechanism to establish the relationships and address the separate issues of environmental risk and ordnance hazards. The PDT must realize that where one type of hazard/risk

exists, there’s a possibility that the other hazard/risk also exists.

Integration will not be easy. Differences in project funding and scheduling for HTRW and OE projects will continue to pose problems. Projects can be very complex. Sites with co-mingled ordnance hazards and HTRW contamination will provide unique issues, and guidance concerning concurrent management of OE and HTRW issues at a site has yet to be defined. If the PDT communicates what it knows honestly and openly, those issues may present few concerns.

Developing the engineering pamphlet on CSMs was a team effort. Working together were the CX’s and URS, Inc. Numerous meetings held with various regulators, both state and federal, from California, Washington, Illinois and Alaska. Headquarters, U.S. Army Corps of Engineers and the Office of the Undersecretary of Defense have been involved and have provided positive feedback and encouragement for the efforts.

For more information on CSMs contact Heidi Novotny at 402-697-2626, or John Sikes at 256-990-2042. For more information on the TPP process, please see Engineering Manual (EM) 200-1-2.

Conference helps DSMOA partnerships move forward

By CANDICE WALTERS
Corps Headquarters

A program that has been successfully bridging the gap between states and the military services when it comes to environmental cleanup for more than 10 years has been making some changes.

The Department of Defense and State Memorandum of Agreement (DSMOA) Program is sponsoring a workshop in Chicago July 9-11 to highlight those changes and ensure that all partners are working together so active and closed military installation clean ups are being done safely and expeditiously.

Among the changes are challenges resulting from new administrative and fiscal guidelines that have affected the government’s ability to reimburse states for their environmental work with the

military services and defense agencies. There also is an increased emphasis on implementing communication technologies to streamline administration and increase efficiencies. A highlight of the conference will be a training session on the six-step DSMOA Cooperative Agreement (CA) process, dispute resolution and post CA activities.

The workshop gives states, territories and DoD “a unique opportunity to work in partnership towards resolving these issues, developing a follow-up action plan, as well as reaffirming our common objectives for the program,” said John Paul Woodley, Jr., Assistant Deputy Under Secretary of Defense (Environment).

The DSMOA program is designed to enhance the involvement of states and territories in the cleanup of active and

closing defense installations and Formerly Used Defense Sites; foster improved relations among the states, military components, defense agencies and the DoD and achieve more efficient and expedited cleanups.

The U.S. Army Corps of Engineers, who administers the program for DoD, has assisted in negotiating agreements with the 46 states, four territories and the District of Columbia. The Corps also manages Cooperative Agreement awards to the states and territories. The agreements describe the type of state-reimbursable services supporting restoration activities funded by the military services or defense agencies.

For more information about the conference, see www.tclients.com/dsmoa/index.htm.

Tiny Bryozoans stop dredging

By KENNETH DUGGER

Jacksonville District

The Jacksonville District and the Engineer Research and Development Center (ERDC) have completed a study on several newly discovered species of tiny Bryozoans. The organisms were discovered on a borrow site for the renourishment of Ft. Pierce



U.S. Army Photo, Jacksonville District

The photo shows a shell fragment on a Lincoln penny. Attached to the shell fragment is the skeletal remnant of one species of concern, Membranipora triangularis (arrows indicate individuals comprising the colony).

Beach. The February 2002 report can be viewed on the Jacksonville District's internet site under "Fort Pierce Beach" at www.saj.usace.army.mil/pd/envdocs/envdocsb.htm.

On March 5, 1999, a lawsuit was filed against the Corps of Engineers concerning the renourishment of Ft. Pierce Beach, Florida. The suit stated that several new species of microscopic bryozoans ("moss animals") had been discovered at the borrow site (Capron Shoals) in 1986 and not found elsewhere. There was also concern about the hard-bottom benthic community near the renourishment site.

The argument was that the bryozoans should receive protection under the Endangered Species Act. Although the National Marine Fisheries Service was petitioned for emergency listing of these species as threatened or endangered, the Service declined. Nevertheless, a Federal judge issued a temporary restraining order halting the project. Since dredging was under way, the Corps and sponsors were obligated to pay standby costs of \$35,000 a day until the case was resolved.

Because another recent beach renourishment project in Miami, Florida, had been delayed for more than two years due to legal and environmental issues, the Jacksonville District (SAJ) was anxious to resume dredging and meet its environmental mandate. On March 12, 1999, the case was settled and the project was

resumed. Among other things, the Corps agreed to fund future studies of both the bryozoans in the borrow area and of the hard-bottom habitat off-shore.

While concerns over disturbance to hard-bottom benthic communities are well documented, the environmental regulatory community has not previously dealt with issues like the one posed by these microscopic bryozoans. Was the new species of bryozoans limited to Capron Shoal, or a small part thereof, and thus at risk? If so, the environmental mandate of the Corps could preclude dredging there. One technical paper published by the plaintiff and some anecdotal evidence was all the information that existed on their distribution. Not only are there very few biologists with expertise in the group of organisms, but the micro-habitat in which they grow (attached to sand grains/shell fragments) is not routinely considered in environmental studies. Therefore, there was little scientific basis to predict whether the bryozoans should merit protection.

Bryozoans are colonial invertebrates found primarily in marine and estuarine waters. While individual organisms comprising the colony are typically less than a millimeter in size, colonies are most often macroscopic and may resemble coral or seaweed. The new species are unusual in that they encrust sand grains and shell fragments rather than being attached to hard-bottom. They are also very small and cryptic.

SAJ contracted with ERDC to perform the lawsuit study. Results confirmed that most of the new species occurred at locations other than Capron Shoals. Whether the other species are limited to that site is unresolved because of the logistic difficulty in studying bryozoans. The most rare of them occur at abundances of about one individual per 500,000 sand grains or shell fragments. Doing a properly designed scientific study is labor intensive since each sand grain or shell fragment must be individually examined. While the settlement agreement stipulated that \$200,000 be allocated to study the bryozoans, data from the study suggested that nearly 10 times that amount would be required to determine the likelihood of any of the species being limited to Capron Shoals.

It is probable that the species and their distributions remained undescribed in part because of the difficulty in collecting and studying them rather than their scarcity. However, the scientific literature is replete with similar examples of microscopic organisms (e.g., foraminefera, nematodes, diatoms) which are logistically difficult to deal with; some of which are found when further study is done, and some of which are not. With the increasing level of attention given to biodiversity by the Corps, the scientific community, and environmentalists, this sort of issue will likely be revisited.

For further information call Mr. Bill Lang, 904-232-2615, william.j.lang@usace.army.mil. The technical point of contact at ERDC is Dr. Bill Brostoff, 601-634-3435, william.brostoff@usace.army.mil.

Students contribute to value engineering program

By CHRISTINA SWANSON
Jacksonville District

Before there was Stephen Covey's synergistic thinking and W. Edwards Deming's Total Quality Management, there was Value Engineering (VE). Since the 1940's, VE has played an integral role in the U.S. Army Corps of Engineers' civil works mission. Now the Corps is expanding the important quality building and cost saving process even further – by tapping into the brain power of college students.

"It's a true win-win situation for everyone," explained Scott Burch, Jacksonville District VE Officer. "The Corps receives some fresh ideas while saving taxpayers' money, and engineering students are getting the opportunity to work on real projects with real consequences, rather than just a class exercise. They also learn about the Corps." What better way to glean some unique perspectives and ideas on age-old civil works processes that must adapt to technological and economical adjustments?

Throughout the nation, engineering departments from 19 universities submitted team applications to be a part of the Value Engineering College Initiative. Out of the 19, only five student teams were chosen, based on the diversity, skills and dynamics of each group. "Just being selected to be a part of these studies speaks very highly of the students," Burch said.

The initiative began in 2000 when Adrienne Kelly, then Pittsburgh District's VE Officer, had her own VE brainstorm to get engineering students involved. This year, Jacksonville and Savannah district VE programs have joined Pittsburgh, going onto campuses to teach a condensed version of the VE prospect course, which, ideally, is taught to all technical Corps employees. A VE study can take place during any project phase after a plan has been recommended and a cost estimate approved, but typically occurs after the feasibility phase.

In the Jacksonville District, five-member teams of senior and graduate-level college engineering students at Valparaiso University and the University of Florida are currently participating in the Corps' VE process. In February, Burch and Mike Wolz taught the UF and Valparaiso teams VE concepts, reviewed the project to be studied and explained how the Corps works.

The two five-student teams, guided by a sponsoring professor, have now studied their assigned project, devised solutions that improve project performance and reduce costs, and presented their alternatives to the project delivery team at district headquarters. While visiting Jacksonville District, students also got a chance to meet the district engineer, tour the district and visit a current project under way. The entire process gave them valuable information about the Corps that will help them decide whether they want to join the Corps after graduation.

The Valparaiso University team studied the North Jetty Sand-Tightening and Jetty Extension Project at Canaveral Harbor in Florida, currently in the "design" phase. Because too much sand is passing over, through and around the jetty and entering the harbor, students were assigned to investigate the best way to

"sand tighten" the north jetty. Dredging the harbor is not a good alternative because it is very expensive and time consuming for channel traffic. A more permanent solution is needed to the current sand tightening method of using geotextile tubes since they have now reached their maximum capacity of sand stoppage. So, a team of engineering students; Ben Gustafson, Dana Parry, Jeff Pintar, Dayna Smoljo and Tim Weidner, with their teacher, Dr. Zudhi Aljobeh, had their mission. They developed four recommendations and six research ideas involving options and combinations of options where some may be more cost effective but not as reliable as others and vice-versa.

It's up to the district's design team to decide if they will use a recommendation or portion of an option or idea. "The ideas and options were well received by the project manager and project engineer involved with this project," Wolz said. "Their idea to expand the use of sea oats, reuse the existing geotubes, sheet pile material substitution, and use pressure grouting are being considered."

In late April, the UF engineering study team followed the Valparaiso team's findings given in March with their presentation to the district. Guided by their teacher, Dr. Ralph Ellis, Sonya Govantes, Paul Heffernan, John Newman, Elia Twigg and Chet Zabik sought innovative alternatives for the planned modifications to the Tamiami Trail (US 41), which is a component of the Everglades restoration program currently in the design phase. Their recommendations are currently being reviewed by the design team and have a potential total savings of more than \$3 million.

The entire process has been very rewarding for the students. "I learned a lot about what the Corps does, much of which I didn't realize," said Ben Gustafson. "This whole experience is helping me decide where I want to work after I graduate." The students said that the most gratifying part of being involved in the VE process was getting the chance to work on a real project versus a "pretend" school lesson. "The possibility that our ideas will be used and will make a difference has meant a lot to all of us," said Tim Weidner.

Because the process of making a civil works project a reality is lengthy and costly, applying VE principles to the process is just good common sense. Waiting on funding and approvals and the time it takes for the design process and plans and specs to take place, technology changes and needs can also change during the process. "VE is taking that second look to ensure we're doing the most cost-effective design at the present time," Burch said. If you take the time to enhance a project's performance and execution and improve its quality, the cost savings will automatically happen.

"This is a valuable experience for all involved," he said. "We're saving costs, building relationships and recruiting future employees all at the same time. We look forward to implementing the ideas of these bright students and working with new engineering students in the near future."

For more information on the VE Program, contact Christina Swanson, Jacksonville District, at 904-232-3065.

Old dirt mine becomes Baton Rouge nature park

By the PUBLIC AFFAIRS OFFICE
New Orleans District

The U.S. Army Corps of Engineers, City of Baton Rouge, Parish of East Baton Rouge, and the Park and Recreation Commission for the Parish of East Baton Rouge (BREC) have transformed an abandoned dirt mine into a 62.5-acre nature park.

On March 26, the groups joined together to dedicate the new park, eight miles northeast of Baton Rouge, as the Blackwater Conservation Area on the Comite River.

Within the year, a recreational fishery should be developed. The Blackwater area will also be used as an educational resource on nature and the environment. The public will have access to a sandbar on the river at the area's western boundary.

Construction on the ecosystem restoration began July 9, 2001. A partnership of the Corps, City/Parish, and BREC turned the abandoned pit into a forested wetland complex with more than 15 acres of water features.

Two lakes were created and will be

stocked with bluegill, largemouth bass and catfish. Restrooms and nearly 1.5 miles of walkways have been constructed for public use. Forested stands of bald cypress, river birch, sycamore, and water oaks cover half of the site. Nearly 7,000



(L to R) Roderick Scott, a representative from Senator Mary Landrieu's office, meets with Col. Tom Julich, Commander, New Orleans District, and Chief of Engineers Lt. Gen. Robert B. Flowers at the Blackwater dedication ceremony.

trees will be planted including bald cypress, tupelo gum, river birch, sycamore,

sweet gum, common persimmon, pines and oaks. The conservation area will provide improved habitat for fish, waterfowl, wading birds, songbirds, reptiles, amphibians, and mammals. Habitats will continue to improve as the lakes and trees mature.

Water-quality improvement is expected, as the area is now a functioning wetland complex. This will improve water on the site and in the Comite River downstream. The area will also provide storage for Comite floodwaters, but will flood less frequently once the Corps completes the Comite River Diversion Canal in 2010.

Advice and assistance were provided by four other agencies: The U.S. Fish and Wildlife Service and Natural Resources Conservation Service, and the Louisiana Department of Wildlife and Fisheries and Department of Environmental Quality.

For more information, see www.mvn.usace.army.mil/prj/cap/blackwater or call the New Orleans District Public Affairs Office at 504-862-2201.

U.S. Army Photo, New Orleans District

DoD adopts new environmental policy

U.S. Department of Defense News Release
DefenseLINK

On April 23, the Department of Defense announced an important step forward in its approach to environmental stewardship by issuing policy requiring implementation of Environmental Management Systems (EMS). The policy calls for systematic integration of environmental management into all missions, activities, and functions. The policy requires current processes to be continually reviewed to identify better ways to reconcile national defense and environmental stewardship missions.

DoD is reemphasizing its commitment to the environment and its position that simply complying with environmental laws and regulations is not enough. EMS is not a new requirement, but a change in management practices. The Department's approach is to adapt existing management

processes so they systematically identify and reduce environmental risks inherent in mission activities. The systematic approach is intended to make compliance with environmental laws simpler, less costly, and a routine part of mission planning and execution. DoD believes this will enhance mission performance while it reduces environmental costs and liabilities.

"Balancing our training and operational needs with the demands of sound environmental stewardship is an increasingly complex challenge, one in which we must succeed to accomplish our mission," said Deputy Under Secretary of Defense for Installations and Environment Raymond DuBois. "Environmental management systems are a proven tool for defining and achieving this balance," he said.

EMS is a recognized "best management" practice implemented by leading

corporations worldwide. In industry, it is recognized as a more effective management approach than traditional environmental compliance-based approaches because it helps to align business and environmental goals. DoD will use EMS to align defense mission and environmental goals.

The White House supports DoD for adopting the policy. "EMS is an important part of President Bush's management and stewardship agenda," said White House Council on Environmental Quality (CEQ) Chairman James L. Connaughton. "I applaud the Department of Defense for being a leader in EMS and for taking this step today," he said.

The DoD policy is on the web at <https://www.denix.osd.mil/denix/Public/Library/EMS/Documents/dodems-040502.pdf>.

One of nine critical projects

The Journey to restore Lake Trafford

By CHRISTINA SWANSON

Jacksonville District

When Florida marina operators Ann and Edward Olesky took a pontoon boat out on Lake Trafford in the Big Cypress Watershed in 1996, they were startled by the number of dead fish they saw and decided to do something about it.

Everyone Ann talked to gave the same advice – tell them and they will listen. “Telling them” began with Ann writing more than 400 letters. When response from then Vice President Al Gore’s office said she first needed local representation, the Oleskys and Fred Thomas Jr., who heads the local housing authority, got Collier County Commission’s endorsement, and began rallying the community toward rescuing the lake.

As a result, the humming, gurgling noises of a dredging project managed by the U.S. Army Corps of Engineers will soon accompany nature’s squawking, chirping, and splashing in and around Lake Trafford. The anticipated dredging is one of only nine Critical Restoration Projects in the South Florida Ecosystem Restoration.

Although sometimes called Okeechobee’s little sister, Lake Trafford is the only major lake in southwest Florida, and plays a huge role in the area’s ecosystem. The lake is in the range of such endangered or threatened species as the Florida panther, wood stork, and bald eagle; so the health of the lake is especially critical. Its surface area of 1,500 acres provides sheet flow for important estuaries and wetland resources that are targeted for protection. Lake Trafford is the headwaters for the Corkscrew Swamp Sanctuary, Camp Keais Strand, and the Fakahatchee Strand system, which includes the Florida Panther National Wildlife Refuge, and several bird rookeries.

In the summer of 1996, residents became alarmed when more and more fish were found dead in the lake, and less and less wildlife were seen around the area. That’s why Olesky and others spread the word to save the lake. With the Collier County Commission’s endorsement, along with the letter writing, the Lake Trafford Task Force formed to study the lake and come up with a solution. They raised \$35,000 with bluegrass music concerts and elementary school cookbook sales, and they solicited state and federal agency help.

The Lake Trafford Task Force found that decaying organic material blanketing the lake bottom was depleting oxygen and producing ammonia levels toxic to fish. They recommended

removing eight to 10 million cubic yards of muck, enough to fill Miami’s Orange Bowl 16 times.

Olesky and other task force representatives were asked to tell their story to such groups as the Governor’s Commission for a Sustainable South Florida, and the South Florida Ecosystem Restoration Working Group, at the same time that the Critical Projects Program was implemented. Congress authorized the Critical Projects Program in 1996 to jump-start the South Florida restoration. Critical projects must provide immediate, independent, and substantial

restoration benefits, have a local sponsor, cost less than \$50 million, and must not be components of the Central and Southern Florida Project.

The task force presented its case well. About 100 projects were considered, but Lake Trafford was selected as one of just nine projects in the Critical Projects Program.

The Corps, working with Big Cypress Basin of the South Florida Water Management District,

designed the project and anticipates it will be awarded next month. Dredging will start soon after. “Saving this lake is an important part of the restoration effort in South Florida because Lake Trafford services many important estuaries, especially during the dry season,” said Carl Overstreet, the Corps’ project manager. “If the lake dies, it’ll have a devastating domino effect throughout the area.”

The Corps will oversee the dredging operation. The muck will be piped to a disposal area and will be reclaimed as an upland wildlife habitat after it dries. Local schools will use the lake as a science-teaching laboratory, coordinating with Florida Gulf Coast University and the Southwest Florida Research and Education Center of the University of Florida in Immokalee. Collier County will continue to monitor the health of the lake.

“What’s made me feel really good about this whole process of telling the lake’s story is learning first-hand that big government *does* work with the common guy,” said Ann. “We *can* work hand-in-hand with nature. Helping Lake Trafford benefits all of us, no matter what walk of life you’re in.”

For more information on the Lake Trafford project, contact Christina Swanson, Jacksonville District, at 904-232-3065.



One of the many alligators found in the Lake Trafford area.

U.S. Army Photo, Jacksonville District

Community relations efforts help regain citizens' trust

By CONNIE LEWIS

URS Community Relations

What do you do when contaminated drinking water keeps 87 households on bottled water for more than seven years and they need to know what's being done about it? The Seattle District of the U.S. Army Corps of Engineers knows.

After taking over the former Larson Air Force Base remedial investigation and feasibility study two years ago, the Corps launched a concerted effort to regain citizen trust. Citizens were proactively involved in decision-making, a Restoration Advisory Board (RAB) was started early in the project at the Formerly Used Defense Site, and the Corps took a "tell-all" stance with the town of Moses Lake, Washington.

Officially called the "Moses Lake Wellfield Contamination Superfund Site," preliminary results from the remedial investigation study indicated that several interim cleanup actions were necessary in the 10-mile study area. Among those actions needed was a solution to restore clean drinking water to the 87-household Skyline neighborhood. Contaminated by past disposal of the solvent/cleaning agent, TCE (trichloroethylene), much of the drinking water for the town of Moses Lake came from the A-Basalt aquifer. While the city took steps to deepen its wells, bypassing the contaminated aquifer, the small neighborhood of Skyline, located just outside the city, was left with its own water system still pulling household water from the contaminated aquifer. Independently owned and operated, the water system owners could not afford to redrill wells into a clean aquifer.

To get these residents off Corps-supplied bottled water, restore their real estate rights, and start the flow of clean water into the affected homes, it was decided that the Corps would drill a replacement drinking water well through the contaminated aquifer and into clean aquifers below. Drilling began in the neighborhood at the end of July 2001.

While the replacement well bore hole was completed in October 2001, the remaining project work (well house, electrical and plumbing) was halted due to the discovery of TCE contamination in the deeper C-Basalt water aquifer. Although

the replacement well was not an immediate fix for the problem, the Corps is still working diligently to provide residents of this community with fresh water. The EPA, in cooperation with the Corps, is investigating a low profile air stripper or carbon activated filters to clean the water available in the replacement well.

Communication Challenges Met

Drilling a 700-foot deep well in a residential area was a real challenge. Noise, dust, water and cuttings disposal, and curious children were among the concerns the Corps had to deal with prior to the first bit-to-ground action.

Community relations issues evolved as both a public safety issue as well as a private citizen issue. To resolve some of these issues, Corps Project Manager Bill Graney, his Corps project team and the contractor consultant team members, URS and Montgomery Watson Harza, implemented the following solutions:

1) Fence the entire construction site area. Located at the edge of the neighborhood near the freeway, the Corps obtained rights of entry to two vacant lots nearby.

2) Provide one-on-one information at the site. The contractor, Montgomery Watson Harza, stayed on site until the drilling crew quit work each day and completed set-up for the next day. Grant County Sheriff deputies added nighttime patrols through the area. Neighbors were cautioned to keep their children outside the fenced areas at all times.

3) Drill only during daylight hours. Drilling usually stopped by 6 p.m. each night and began again around 7 a.m.

4) Be responsive to neighbor comments. Site personnel kept watch for visitors, making sure someone responded immediately to their presence and questions. Neighborhood residents visited the site each day to watch the drilling.

5) Control dust. Asphalt a dirt-road access lane to cut down on the dust. The Corps ordered asphalt chips on the road and increased attention to dust within the site itself to reduce dust.

6) Post a construction information sign. A sign was built containing a feedback comments box, a well-bore depth graphic, and a construction update section. Each day, the site project manager

or the drilling foreman noted the drilling depth achieved, added notes to the construction update form, inserted photos from the Construction Update sheet, and checked the comments box.

7) Brief the local Chamber of Commerce board. Graney and the URS public affairs consultant set up a Chamber Board meeting to advise members of upcoming disruptions in the area.

8) Brief the RAB at each meeting. As Corps co-chair to the RAB, Graney provided the Community co-chair with regular updates between the bi-monthly meetings. The community co-chair provided this information to neighbors and other RAB members to keep communication channels open.

9) Conduct a public tour of the site. RAB members and the public were invited to visit the construction site to see where the well was to be drilled. Fliers, postcard mailings, news advisory briefings, and the public notice ad all carried information about the meeting and an invitation to attend the site tour.

10) Issue newsletters. The Corps released two RAB newsletters updating progress on the remedial investigation, discussing interim clean-up actions, and providing a feedback column for questions.

11) Maintain FAQs column. This "Frequently Asked Questions" column featured detailed information concerning the TCE contamination, history, and health questions. Comments or questions for this column were generated at RAB meetings, from phone calls, or the comments box.

12) Attend local neighborhood meetings. Graney met with local Neighborhood Watch members and a Grant County Sheriff's Department deputy to brief them concerning the anticipated disruptions due to scheduled construction.

The intense and well-coordinated community relations effort helped the Corps regain the citizens' trust, relying on the project manager's commitment to keep the public informed.

For more information contact Bill Graney, project manager, Seattle District by email at William.p.graney@usace.army.mil or at 206-764-3494. This is an edited and updated version of the article published in Participation quarterly, Fourth Quarter 2001.

DoD releases munitions action plan

U.S. Department of Defense News Release
DefenseLINK

On April 24, the Department of Defense announced the release of the Munitions Action Plan, a critical element of the Pentagon's ongoing commitment to the readiness of America's men and women in uniform and effective stewardship of the environment.

The goal of the plan is to provide a comprehensive and consistent approach to managing military munitions across the munitions life cycle. DoD leaders will use the plan to protect and enhance force readiness, maximize explosive safety and minimize the environmental impact of military weapons. "Equipping and training our armed forces with the right munitions - for the right mission, at the right time - is central to our ability to fight and win the nation's wars," said Deputy Secretary of Defense Paul Wolfowitz. "Implementing the Munitions Action Plan will improve munitions management and is an important step in our efforts to address the challenges to force readiness."

Corps partners meet at OE stand-down

By CAROL YOUKEY
Huntsville Center

The Ordnance and Explosives Center of Expertise (OE-CX) took advantage of a project holiday work break occurring in December 2001 and hosted another OE stand-down in Huntsville, Ala. The OE-CX, part of the U.S. Army Engineering and Support Center, Huntsville, facilitated the two-day stand-down on behalf of the U.S. Army Corps of Engineers.

The annual OE stand-down gathers wide participation from those working on Corps OE projects. The most recent one was no exception. Attendees numbered more than 200 with most representing Corps elements, including Headquarters, two divisions, 14 districts, laboratories, and the Hazardous, Toxic, and Radioactive Waste Center of Expertise (HTRW). Additional representatives attended from the offices of the Department of Defense Explosives Safety Board, U.S. Army Chief of Staff for Installation Management, Deputy Assistant Secretary of the Army (Environment, Safety, and Occupational Health), U.S. Army Base Realignment and Closure Office, U.S. Army Environmental Center, and U.S. Army Technical Center for Explosives Safety, and various contractors.

The purpose of the OE stand-down is to bring project and program issues into a forum for discussion by the Corps and its DoD partners. Many topics center on revisions to policies or procedures. The stand-down is an honest attempt to look at Corps execution of OE work and to note areas that seem to be working well and those which may need strengthening. It is also a good venue to share lessons and learn from those who have gained significant experience in some rather challenging areas.

Approximately 30 presentations covered a wide variety of topics. Categories of presentations were: the OE process, integration of HTRW and OE work, Design Center mentoring, safety issues, technology/tools, and the need for public involve-

The plan applies only to conventional military munitions and contains 29 specific objectives that are designed to result in faster, better and more cost-effective accomplishments of common goals for the military during what is referred to as the "munitions life cycle." The "munitions life cycle" consists of five phases: acquiring and producing munitions, using munitions on test and training ranges, managing the stockpile of military munitions, demilitarizing (making into scrap) excess, obsolete or unserviceable munitions, and dealing with munitions left on ranges no longer operational.

Created by DoD's Operational and Environmental Executive Committee for Munitions, comments and input from the public regulators were considered in the plans's earliest development stages. The plan has been distributed to a wide variety of public and regulatory stakeholders whose input will be reflected in future, updated versions of the document.

Full text of the Munitions Action Plan may be found at <https://www.denix.osd.mil/mapcrd>.

ment/participation. Program Managers for Formerly Used Defense Sites and BRAC programs presented updates covering status, funding, and current issues.

The agenda featured several presentations that discussed the process used by the Corps as it executes OE removal responses (for DA and DoD). Attorneys from the OE-CX and Los Angeles District spoke on legal and regulatory issues.

Other presentations were made on the integration of HTRW and OE work. The Corps' initiative to develop guidance for Conceptual Site Models for both OE and HTRW was addressed. Also presented were plans to complete a corrosion study, which dovetails previous studies made by Corps laboratories, and which will investigate the effect of leaching by corroded ordnance items. Technical Project Planning was reviewed as it relates to data collection requirements for both OE and HTRW.

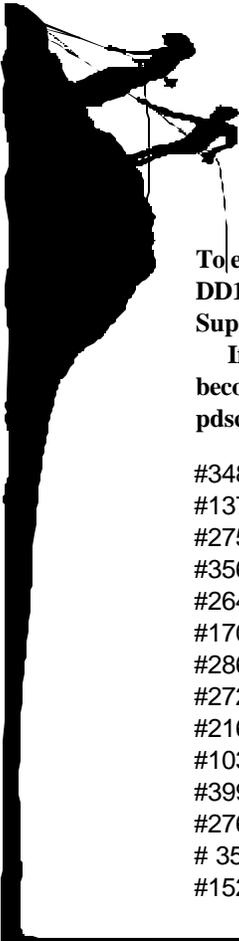
The OE-CX explained how mentoring of districts for OE Design Center status is being conducted and how it will better position the Corps to execute a large workload, if that should become a reality. Technological advances, safety updates, findings of project audits, and safety policy issues were, as always, critical components of the two-day program.

A break-out for geophysical issues occurred on the second stand-down day. That session was especially helpful for government and contract geophysicists to discuss quality control and quality assurance procedures, equipment questions, and other issues related to the geophysical arena.

Based on individual feedback, attendees feel that the stand-down is a good use of their time, because the focus is on Corps work only and the agenda includes only those topics that are relevant and applicable.

For more information, contact Carol Youkey, Chief, Ordnance and Explosives Center of Expertise, at 256- 895-1563 or <http://www.hnd.usace.army.mil/oew/Standdown01new.asp>.

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THE CHALLENGE TO EXCEL

Professional Development Opportunities

Listed below are environmental PROSPECT training courses for the remainder of FY02. To enroll, supervisor and local training coordinator approval must be obtained and a completed DD1556 must be forwarded to the Registrar's Office of the USACE Professional Development Support Center (PDSC), phone 256-895-7421, or fax 256-895-7469.

If a course is full, you may request to be put on a waiting list and you will be informed if a space becomes available. Additional information about these courses is available on-line at <http://pdsc.usace.army.mil>, or contact John Buckley, 256-895-7431.

#348	Ecosystem Rest/Plan/Eval	July 8-12	La Crosse, Wis.
#137	Regulatory V	July 8-12	Central
#275	Wetl Constr WQ Imp	July 8-13	Oakland, Calif.
#356	CERCLA/RCRA Process	July 16-19	Denver
#264	Ecosys Pln/Mgt Issues	July 22-26	Vicksburg, Miss.
#170	Environ Laws and Regs	July 22-26	Virginia Beach, Va.
#286	Real Prop Mgt	July 22-25	Western Region
#272	Fund Wetlands	Aug. 5-9	Olympia, Wash.
#216	Drilling and Sampling	Aug.12-16	Huntsville, Ala.
#103	Ecology for Engineers	Aug.12-16	Seattle, Wash.
#399	Ord and Exp Response	Aug.12-15	Huntsville, Ala.
#276	Wetlands Dev and Rest	Aug.12-15	Olympia, Wash.
# 35	Working Diver	Sept. 3-26	TBD
#152	Water Data Mgt/HEC-DSS	Sept.16-20	Davis, Calif.

Upcoming Events



Thirtieth U.S. Department of Defense Explosives Safety Seminar, Atlanta, GA, Aug. 13-15. See: www.cpia.jhu.edu/Meetings/Announcements/2002expsem/2002expsem.html.

7th Annual Joint Services Pollution Prevention & Hazardous Waste Management Conference & Exhibition, San Antonio, TX, Aug. 19-22. See <http://p2-hwmconference.com/>.

UXO/Countermines Forum, "Preserving Our Homeland - Our Nation - Our Environment" Sept. 3-6, Orlando World Center Marriott Resort & Conference Center. See www.theforum2002.com.

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