



US Army Corps
of Engineers®

HEADQUARTERS

ENGINEERING & CONSTRUCTION NEWS

VOLUME III NUMBER 6

MARCH 2001

FEBRUARY'S THEME:

Registry of Skills

DWIGHT'S NOTES

Last month in my notes, I discussed the report by Northwestern Division on the results of their "Capable Workforce" pilot program. In this issue the theme is the "Registry of Skills" and Northwestern Division has provided an article on their use of the registry during their emergency operations after the recent earthquake. Also, in the "Job Vacancies" article you can see some of the hiring which Northwestern Division has initiated.

Barracks are the Army's number one facility priority at an investment cost of over \$9 billion and with an Army-wide buyout goal of Fiscal Year 2008. Those of you executing barracks projects for the Army are aware of the barracks mid-program review that began in November 1999. This review, co-sponsored by MG Van Antwerp (ACSIM) and MG Hunter (the then DMP), was to ensure that the barracks program was going in the right direction in providing our single soldiers excellent housing and barracks complex facilities. Headquarters Engineering and Construction staff members Mike Holt and Jeff Hooghouse played a major role in supporting the review with staff from the OACSIM. Recommendations from the review were presented for vote on 6-7 March 2001 to a newly formed subcommittee for barracks co-chaired by OACSIM and ODCSPER. Representing Engineering and Construction on this committee and as a voting member was Frank Norcross. Some of the major initiatives of the barracks mid-program review included proposed revisions to 1+1 barracks criteria, changed type of construction and increased use of design-build acquisition. Implementation guidance of approved recommendations will be developed and disseminated in the near future. We held a follow-up barracks meeting on 8-9 March 2001 with MSC staff to discuss the barracks mid-program review approved recommendations and their impact on the remainder of the barracks program through Fiscal Year 2008.

I would also like to remind you of the importance of partnerships with industry at both the national and local levels. An updated partnership agreement was signed this month with the American Consulting Engineers Council (see <http://www.usace.army.mil/inet/functions/cw/cecwe/notes/revagree.pdf>). All team members are encouraged to work with the various industry and professional groups at their local level.

At our last Civil Works Town Hall in the GAO Building, MG Van Winkle spoke about the need to tell the Corps story, and for every Corps employee to be a Public Affairs Officer. As a new initiative to tell the Corps story, including a discussion of such controversial topics as the Upper Mississippi

DWIGHT'S NOTES (CONTINUED)

Navigation Study, Corps Reform proposals, review procedures, projects in the news, etc.; a Hot Topics Web Page has been activated. The Hot Topics page can be accessed directly at http://www.usace.army.mil/inet/functions/cw/hot_topics/. It can also be reached via a button from the USACE, HQ and Civil Works home pages: <http://www.usace.army.mil/>; <http://www.hq.usace.army.mil/hqhome/>; or <http://www.usace.army.mil/inet/functions/cw/>. Please take a look, and share links to this page with the people, both inside and outside the Corps, whom you work with - or, for that matter, anyone interested in the Corps.

Included in the Hot Topics is LTG Flowers testimony before the Subcommittee on Transportation and Infrastructure, Committee on Environment and Public Works, United States Senate on 15 March 2001. I recommend that you read the Chief's statement. Also, if you are interested in statements by the committee members to be http://www.senate.gov/~epw/stm1_107.htm#03-15-01 and read Senator Christopher Bond's statement in support of the Corps of Engineers.

We have started our Dam Safety Peer Review and I encourage all districts to fully participate in this review. I was pleased with the attendance by Corps team members at the recent NDSP seminar in Emmitsburg. The participation indicated a desire to learn more about your job and how it ties into the overall corporate program.

Essayons,
Dwight

(Editors' note: If you want to share your thoughts with our readers regarding Dwight's Notes send an email to the E&C News editor (charles.pearre@usace.army.mil). A synopsis of your comments will be published in the next issue.)

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THIS PUBLICATION WILL BE ISSUED ON A MONTHLY BASIS AND DISTRIBUTED BY E-MAIL AND POSTED ON THE INTERNET AT [HTTP://WWW.USACE.ARMY.MIL/INET/FUNCTIONS/CW/CECWE/NOTES](http://www.usace.army.mil/inet/functions/cw/cecwe/notes). IF YOU WOULD LIKE TO CONTRIBUTE ARTICLES OR HAVE SUGGESTIONS FOR FUTURE ARTICLES, PLEASE CONTACT CHARLES PEARRE, CECW-EP, 703-428-7343.

Registry of Skills

USACE DEPLOYS REGISTRY OF SKILLS

The USACE-wide Registry of Skills (RoS) has been up and running since September 2000. The RoS is an on-line database created to support the Capable Workforce program, a USACE initiative to determine existing skills and capabilities and identify the gap between our current capabilities and future needs. It is open to all Corps employees.

The system web site allows individuals to enter information on their education and training, certification or registration, experience, and skills. While we encourage all USACE team members to register in the RoS--the broader the registration, the more valuable the database--registration in the system is voluntary. There are no supervisory controls over the material entered. The scope of information entered is strictly a personal choice – you choose how much or how little information to enter – however, personal data page must be completed and saved before the search capability is enabled.

The RoS database can be searched very quickly using a wide variety of search criteria to identify team members with potential. Example searches could identify team members with needed skills to serve on regional design teams, provide independent reviews, serve as expert consultants, serve as troubleshooters, serve on interagency panels or committees, or assist in emergency operations, etc. Again, this is a voluntary system and being registered does not obligate you to participate. The RoS is will not circumvent command and supervisory controls if a team member skills are needed.

To register or search for people with specific skills and abilities in the RoS, you must:

- Have access to a computer with a web browser (e.g., Internet Explorer or Netscape navigator).
- Have a CEEIS USERID (previously CEAP) and an Oracle password. These are the same ones used for CEFMS.

To use the RoS, simply use your browser to go to the URL <https://ros.usace.army.mil:8096> and log on. If you don't already have the USERID and password, call your UPASS administrator (in your CIO Office), and he/she will set up your USERID and password. The RoS is intended to be very user-

friendly. It contains an on-line Help System and a link for sending email to the RoS database administrator for reporting problems, to comment on the system, or to suggest improvements.

The RoS was developed by the Corps practitioners - the people who would actually use the system themselves - for the benefit of the organization and the employees. Let's all do our best to make it work!

POC: RAY NAVIDI, CECW-E, 202-761-4238

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REGISTRY OF SKILLS IN THE NORTHWESTERN DIVISION

The Northwestern Division has had moderate success in registration of individuals, both in the Division Office and in our 5 Districts. As of the end of February 2001, we have 1,050 registrants out of the Corps total of 2,343. CENWD sees the RoS as an important element in the Capable Workforce Initiative.

The CENWD established a POC at both the Division Office and at each District Office promoting the benefits of the RoS, and sent out (initially) weekly status reports of registrations by office. We now send out monthly reports. The appointed POC should advise people that this is for all organizational employees, not just the organization that the POC resides in.

Reports of registrations can easily be prepared from the RoS Home Page. Using the "Search the RoS" tool, and going to the third search page, entering CENW will return both a numerical count and a listing of all CENWD registrants (including Districts), and the results can either be sorted alpha (default) or by organization. Sorting one level lower by CENWD, CENWK, etc. returns both counts and listing (as above). This search technique will work for any Corps organization. The numerical count feature was added by the database administrator and is very convenient for macro reporting.

Our challenges now are continuing to spread the word for more voluntary participation in the RoS, and then to work on the quality of the data. The raw numbers of participants is not indicative of quality of data input, and in many cases represents only registrants names, without any skill, training, etc. data included.

We recently used the RoS for a purpose we had not envisioned, a disaster exercise as a result of the Seattle area earthquake recovery effort. We used it to identify Structural Engineers and again to identify personnel with GIS expertise. Although there are limited numbers of the Corps family registered, and all registrations are not complete, we were able to get adequate results.

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District of the Month

CHICAGO DISTRICT

The Chicago District is responsible for water resources development in the Chicago metropolitan area, a unique urban area of about 5,000 square miles with a population of about 8 million people in northeastern Illinois and northwestern Indiana. The district has a staff of about 215 people, of which 74 are in the Engineering Division and 31 are involved in the construction aspect of the Construction-

Operations Division. Although Chicago is geographically one of the smallest districts in the Corps, the district oversees approximately \$73 million in project-related funds annually.

In addition to serving a population of 8 million people, we interact with 17 Congressmen and 4 Senators. The district has at least one project in virtually every type of construction currently being done by the Corps, including: tunnel work, shoreline protection, beach nourishment, in-lake construction, river work, harbor maintenance, structural flood control, and urban riverine restoration. Our Engineering Division has a diverse workforce representing all areas of engineering, including geotechnical and coastal.

The Chicago District is committed to providing quality, cost effective and environmentally sustainable planning, engineering and construction products and services. The district is involved in a variety of engineering and construction projects stemming from its primary mission areas of Flood Control, Shoreline Protection, Navigation, Environmental Protection, Emergency Management and Support for Others.

Although the Chicago District does not have a Military Construction mission, we do oversee military construction in the Chicago area under a memorandum of agreement with Louisville District. Louisville District's Ft. Sheridan office and Chicago District's Northbrook Area Office were consolidated in October 1999. Currently, the Chicago District provides construction management services on two major contracts, a landfill cap at Ft. Sheridan under the BRAC program, and construction of an Army Reserve multi-story building in Arlington Heights, IL, as well as a number of other smaller contracts at Ft. Sheridan.

Chicago District has a strong and growing construction program. The projects described in the following paragraphs give one a good idea as to the type of work performed and the extent of the district construction workload. In addition, as a small highly urbanized district, we face some unique challenges in execution of our construction mission. Many of our construction sites are very restrictive as to work area and access, and a number involve utility relocations or high contamination levels. The population density, and the resulting traffic and proximity of members of the public, add to the challenge in time required to travel to or between sites and in controlling public access and maintaining site security. The Chicago District executes our challenging construction mission through two area offices, the Northbrook Area Office, in Northbrook, Illinois, and the Calumet Area Office in NW Indiana.

Chicago District is currently recruiting for GS-11 and GS-12 Civil Engineers in each area office, as well as a number of positions in Engineering, Construction–Operations and Project Management in the district office due to the growing workload.

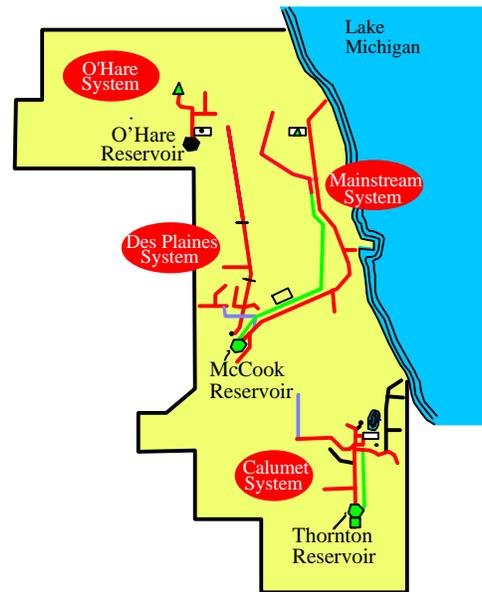
Chicago Underflow Plan (CUP) Reservoirs - Last year the Chicago District broke ground for an overburden cut-off wall, signaling the official start of construction for the McCook reservoir project. The McCook Reservoir, combined with the Thornton and O'Hare reservoirs, make up the Chicagoland Underflow Project (CUP), an integral part of Chicago's \$3 billion Tunnel and Reservoir Plan (TARP). TARP is a regional plan developed by local interests in the late 1960's and early 1970's to reduce flood damages and improve water quality in the Chicago metropolitan area watercourses. The goals of TARP included: (1) prevent backflows to Lake Michigan; (2) Eliminate waterway pollution caused by combined sewer overflows; (3) provide an outlet for floodwaters; and (4) comply with Federal and State environmental laws.

The Office of Management and Budget and the U.S. Environmental Protection Agency (USEPA) divided TARP into two parts, with construction to be accomplished in two phases. Phase I authorized Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) to construct about 110 miles of tunnels, some as large as 35 feet in diameter, bored into limestone 240 to 350 feet below ground, and near surface collector and drop shaft systems. TARP Phase II involves flood damage reduction features. The MWRDGC, the State of Illinois, and local interests has sought implementation of TARP Phase II by the Chicago District through its flood control authorities. TARP Phase II proposed about 21.5 miles of tunnels, on-line reservoirs, and three terminal reservoirs. Due to the highly developed, urban nature of Chicago, rain generates large amounts of storm water runoff. The storms frequently cause sewer capacity to be exceeded, backing up into basements and sending overflow into area waterways.

This system of three terminal reservoirs will combine to carry the storm water, raw sewage, overbank flooding, and prevent the spread of potentially harmful organic pollutants in Chicago and 51 neighboring communities, an area of 375 square miles.

In 1998, the Chicago District completed construction of the 350-million gallon O'Hare Reservoir, one of the three reservoirs proposed in Phase II. Last year the Chicago District broke ground on 7.5 billion gallon, \$500 million McCook Reservoir. When completed, the McCook Reservoir will be the largest reservoir of its type in the world.

The McCook Reservoir, will be built on land currently used as sludge drying lagoons in Bedford Park, Illinois, between the Des Plaines River and the Chicago Sanitary and Ship Canal. This open-pit reservoir will provide an outflow for the Mainstream and Des Plaines tunnel system, capturing, storing and treating combined sewer overflows that otherwise would be discharged untreated into area waterways and eventually Lake Michigan. The reservoir tunnel lengths will vary in size from 1,100 to 3,100 ft, and in diameter from 8.5 to 33 ft. It will most likely be more cost effective for Tunnel Boring Machines (TBM's) to drill the lengthier tunnels while drill and blast construction techniques are most likely for the shorter tunnels.



Initial work will consist of removing approximately 10-15 feet of overburden. A commercial quarry will operate on the site for approximately 9 years, until the pit reaches a 300-foot depth. During the excavation of the quarry two 16' diameter tunnels will be constructed by MWRDGC virtually on top of each other. One tunnel will transport large equipment and material while the other will be reserved for a conveyer system to move larger materials out of the quarry faster and easier.

The Chicago District will construct many features of the project. Reservoir pumps and a grout curtain aquifer protection system will be constructed during the commercial quarrying phase. The slurry wall and grout curtain will be installed around the reservoir perimeter to control the amount of water that may enter or leave the reservoir through the overburden and bedrock respectively. The District is looking to implement state-of-the-art-grouting techniques, including balanced stabilized grouts, which reduce bleeding, and increase penetration, and real-time computer monitoring of grouting. The benefits

of real-time computer monitoring include higher pressures, increased penetration, lower segregation and an increased durability of the curtain.

Additional design features include main and distribution tunnel gates with high-pressure wheel gates designed for pressures up to 300 psi and weighing 65 tons each. Sixty-inch cone valves controlling the flow, rated for pressures up to 300 psi, will arrive to the site pre-assembled to minimize the amount of fieldwork needed for installation.

Other distinctive features such as inlet/outlet structures and aerator systems will be added when quarrying is complete. Aeration presents unique design issues because the reservoir will contain variable water quality requiring variable oxygen input, variable water depths affecting the way oxygen is transferred and variable-mixing energies required to properly distribute dissolved oxygen. To meet these challenges, the Chicago District is working with the Engineering Research and Design Center (ERDC), the USACE Construction Engineering Research Lab (CERL), USGS, researchers at the University of Minnesota, University of Illinois at Urbana, Marquette University and Texas A&M. When completed, the McCook Reservoir will prevent an average of \$77 million in flood damages annually.

When construction of the final reservoir in Thornton, Illinois, is complete around 2005, it will have a potential storage capacity of six to eight billion gallons. The Thornton reservoir will provide an outlet for the existing Calumet tunnel system and capture, store and treat combined sewer overflows that would otherwise be discharged untreated into the Calumet-Sag Channel, the Little Calumet River and the Grand Calumet Rivers. When completed, the Thornton quarry will prevent average annual flood damages of between \$16 million and \$27 million.

Chicago Shoreline Rehabilitation Project - Chicago's "Jewel", which sets it apart from all major cities in the world is its 30 miles of Lake Michigan shoreline, nearly all of which is publicly owned.

The existing shore protection structures, built in the early 1900s, are in various stages of failure. Without intervention, about 11 miles of structures would have failed. The Chicago Shoreline Project involves reconstructing revetments to prevent storms from flooding the adjacent highway and eroding the shoreline. Within the 30 miles of shoreline several interests must be addressed. Local sponsors such as the Chicago Park District and City of Chicago, have concerns with respect to parks, harbors, recreation, water purification, plants, commerce



and public opinion. Construction of several portions of the shoreline have already been completed, including the reconstruction of a breakwater protecting a water purification plant serving 2.5 million people. The driving force behind the design of the lakefront structure is the 2,000-lb/ft² wave crest, which persistently batters the Chicago shoreline year round. One of the challenges and important aspects in designing the structure is bracing it against wave action to make sure that it would be stable during construction. The time between the sheet pile system being installed and the concrete promenade system being poured is not always known or in some cases delayed due to the unpredictability of the Chicago lakefront weather. The batter pile is a superior brace in the system, providing the stability needed during construction and adequately transferring these wave loads both in

tension and compression. After construction, the load is then shared between the batter piles and the promenade revetment step system. The majority of the load goes through the promenade and revetment steps, which act as a tendon transferring both tension and compression back to the shear key, which acts as a dead man anchor. The vertical load is also shared between the vertical piles, under the promenade slab and the sheet pile system.

Numerical methods for wave force determination were inadequate; therefore physical modeling at WES took place in a 1.5 ft wide flume to determine overtopping rates for several selected structural configurations, which would aid the City of Chicago and Chicago Park District in selecting the preferred lakefront configuration. A secondary purpose of the modeling was to investigate the stability of the toe stone, which is placed at the base of the sheet pile wall after construction is complete. The \$301 million project is scheduled for completion by 2005.

Indiana Harbor and Canal Dredging and Disposal Project - Indiana Harbor and Canal is a federal navigation waterway. Because of the lack of a suitable disposal site for the approximately 4.6 million cubic yards of contaminated sediments at Indiana Harbor, there has been no dredging since 1972. A plan was developed jointly by the Chicago District and U.S. EPA Region 5 calling for the construction of a disposal facility on an active RCRA site in East Chicago, Indiana. The site chosen for constructing the CDF is the former Energy Cooperative, Inc. (ECI) site. The CDF will address a wide variety of environmental issues including: groundwater cutoff walls; a groundwater gradient system to maintain an inward groundwater flow; an on-site wastewater treatment plant, perimeter caps around the dikes for confining the contaminated sediment; perimeter air monitoring; a future RCRA cap and post closure monitoring after the CDF is closed.



Extensive research and design on handling and disposal of contaminated sediments has and will continue to proceed. The Chicago District asked ISPAT Inland Inc located on the Indiana Harbor Canal to test an innovative hydraulic dredge in the canal where sediment thickness can reach 7 ft. Approximately 5,000 cubic yards of in-place sediment was dredged along a dock face in the canal. Water-quality impacts, such as the re-suspension of sediment in the canal during the dredging were monitored and WES will publish the results in a technical report. Ambient air monitoring of the basin used to store the sediment will began prior to the dredging and will extend for one year. ISPAT Inland has also designed, constructed and operated a pilot-scale water treatment system to treat the water generated during dredging. This data will then be incorporated into the final design of the confined disposal facility at ECI. A key to the success of this project has been the extensive coordination between all of the interest groups involved.

Waukegan Harbor Dredging and Disposal Project - Waukegan Harbor is an authorized federal commercial deep-draft navigation project located in the city of Waukegan, Illinois, approximately 38 miles north of the city of Chicago. A major portion of the waterborne commerce in Waukegan Harbor is composed of building cement and gypsum rock shipped to facilities in the area. In 2030, the total shipments to Waukegan Harbor are expected to reach 739,000 and by 2040 tonnage is expected to reach 788,000. Furthermore, the harbor is host to a number of marine contractors and several large and small industries. The harbor is also home to a large number of recreational boats ranging in size from 25 to 65 ft and is occasionally used as a base for commercial fishing operations.

In 1994, the Chicago District conducted a cursory economic analysis of cost savings of transportation of bulk cargo with deeper harbor depths. Deeper channels allow modern commercial ships with deeper drafts to be loaded more fully than would be the case if they had to operate in shallower (18-foot) depths. Under current conditions light loading is often required. This is a process in which fully loaded deep-draft vessels have to make a stop and temporarily off-load portions of their cargo at a deeper harbor before entering a shallower draft harbor, resulting in inefficient use of the vessel. Based on the 1970 authorized deepening project the total average annual cost saving over a 50-year time frame, for all vessels using the harbor, was projected to be \$1,912,500.

In addition to its importance for commerce, the U.S. Coast Guard and the Maritime Administration recognize Waukegan as a Harbor of Refuge during severe weather on Lake Michigan. The two Ports of Kenosha and Racine, Wisconsin were deauthorized, making commercial vessels traveling between Milwaukee and Chicago dependent on the Port of Waukegan as a safe haven during storms. In recent years however it has become impossible to even consider upgrades of Waukegan Harbor because of a problem not directly related to navigation but due to contamination of the harbor sediment. Upon discovery of this contamination, maintenance dredging of the harbor was halted, pending the identification of an acceptable disposal site for the material. Although significant efforts have been made, no environmentally acceptable site to dispose of the contaminated sediment in the harbor has been found. In recent years this contamination is significant enough to have warranted Waukegan Harbor being formally designated as an Area of Concern (AOC) by the International Joint Commission (IJC), which is made up of Canadian and US officials who regulate all issues pertaining to management of the Great Lakes.

To alleviate the navigational and environmental concerns at Waukegan Harbor a variety of alternatives are being considered. The main purposes of the proposed project would be: (1) to resume maintenance dredging of the Federal navigation channel; (2) to deepen the harbor channels if economically feasible; and (3) to provide a total harbor clean-up of contaminants, and thereby becoming the first site to be removed from the IJC's list of "Areas of Concern".

Several alternative sites are currently being investigated as potential disposal areas for the contaminated material, including both upland and in-lake confined disposal facilities. One rather unique opportunity to utilize an area within a USEPA / IEPA regulated Superfund site is also being pursued. This alternative is a settling basin at a major industrial site, which has recently ceased operations and is under USEPA mandate to be filled in and closed to prohibit the release of asbestos fibers into the atmosphere.

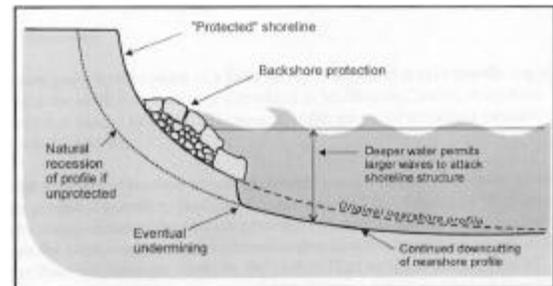
The Chicago District is working closely on all of these alternatives with various groups including: Illinois Environmental Protection Agency, the United States Environmental Protection Agency, the Citizens Advisory Group, Johns-Manville Corporation, and the Illinois Department of Natural Resources to find an acceptable solution for all of the parties involved.

Illinois Shoreline Interim IV - This Illinois Shoreline Erosion study is the 4th and final Interim study of the Illinois shore of Lake Michigan. Congress authorized the Corps of Engineers to study the entire 65-mile shore of Lake Michigan with legislation passed in 1971 and 1974.

This study focuses on shore erosion in the 22-mile reach along the north shore, from Waukegan to Wilmette. Shoreline erosion has been increasing over time (although partially masked by the recent

low water period) due to the continuing loss of sand and gravel from the beaches and offshore areas in the littoral zone. The direction of the net littoral drift along this section of Lake Michigan shoreline is from north to south. The construction of Waukegan Harbor, beginning in the late 1800's and the Great Lakes Naval Training Center Harbor in 1923 have significantly interrupted the supply of sand to the study reach. Therefore, the total volume of sand, which will remain along the shoreline and nearshore profile within the study reach, is reduced each year by a significant degree.

The lack of adequate sand depths in the nearshore zone results in excessive deepening of the nearshore lakebed through a process commonly known as "lakebed downcutting". As a result, much of this reach is protected by shore protection structures constructed by local property owners, which has arrested the bluff retreat. However, the average useful lives of these structures is decreasing due to increasing depths in the nearshore area, which allow larger storm waves to attack the shore. Shore protection structures then experience accelerated erosion at the toe.



To alleviate this problem, three possible solutions were considered: (1) beach nourishment with sand and gravel; (2) construction of breakwaters; and (3) lakebed Paving, a relatively new concept in which critical portions of the lake bottom are covered (armored) with medium sized stones to prevent wave-generated currents from deepening the uncovered lake bottom till (which had been covered and naturally replenished with sand in previous years).

Breakwaters were eliminated from consideration because of high construction and maintenance costs. The beach nourishment alternative also proved to be economically infeasible, and extremely difficult to implement given the nature of the shore/bluffline in the reach and the many property owners along the 22-mile reach. The Corps' efforts are now focused on the lakebed-paving alternative. Recent analyses, including physical and numerical modeling have investigated the feasibility of the lakebed armoring concept, including required stone sizes, width and thickness of protection and the performance of the protection with respect to the reduction of downcutting and bluff erosion rates inshore of the armored area for any unprotected reaches of shoreline.

The coastal evaluations for the paving concept were conducted under contract with Mead and Hunt and Baird Engineering. Two important tools used in developing an effective shoreline protection plan were the physical and numerical modeling used to determine the relative performance or stability of various lakebed alternatives. The physical modeling was implemented in the Wave Research Flume (WRF) at the Canadian Hydraulics Center (CHC) of the National Research Council of Canada in Ottawa. The WRF measures 97 m long by 2 m wide by 2.7 m deep, and is equipped with an irregular wave generator capable of producing significant wave heights of up to 0.6 m. For this particular study, the WRF flume was split into two test channels through the construction of a temporary dividing wall. This was done to allow the construction and testing of lakebed paving and submerged berms on two different nearshore profiles. These profiles were representative of the conditions along the study reach. The numerical modeling was analyzed using the deterministic coastal process model, COSMOS. The COSMOS model was run for the range of wave, water level and lakebed conditions tested in the physical model. In general, it was assumed that the numerical model provided an acceptable level of accuracy and did not need to be calibrated. The model was however calibrated for a range of bluff recession and downcutting rates using wave data sets, which were statistically representative of 40 years of hindcast data.

The investigations associated with the field surveys, physical modeling and numerical modeling led to the identification of three possible variations on the lakebed paving concept: (1) one or two thin layers of cobbles or riprap; (2) a submerged berm running parallel with the shore; and (3) a hybrid design which consists of smaller cobbles placed in the form of a submerged berm. With time the cobbles would be distributed by wave action, to form a storm induced pavement section.

The method for assessing the benefits of these three lakebed paving alternatives involve many variables such as: construction costs, maintenance and replacement costs, constructability, navigation, fish habitats as well as the primary benefit of eliminating the continually increasing threat of severe shore and bluff erosion. Once this is determined a monitoring program might be set up for a test reach in order to assess these variables.

Fox River Dams - The Fox Chain of Lakes and the Fox River located upstream of Elgin Illinois are stranger to dams, spillways and sluice gates. Records show that some of the earliest dams were constructed on this river as early as 1854 in order to improve navigation and recreation on these waterways. Since then there has been a considerable amount of residential development along the Fox River and associated Chain of Lakes. This has raised concerns not only over navigation and recreation of the waterways, but also over the high floodwater levels that are a potential threat to the Fox River watershed and surrounding communities.

Currently of interest are the two fixed crest spillways that exist on the Fox River at McHenry and Algonquin which are owned by the State of Illinois and operated by the Illinois Department of Natural Resources / Office of Water Resources (IDNR-OWR). McHenry Dam, located 7 miles downstream from the Chain of Lakes, partially controls the outflow of water from the lakes and has a drainage area of approximately 1,250 square miles. Algonquin Dam is located approximately 16 river miles south of the McHenry Dam and has a drainage area on the order of 1,403 square miles.



Flood forecasting is a way that local authorities can predict the occurrence of a potential flood and determine the possible impacts that it may have on the surrounding community. In order to properly monitor and forecast the conditions within the watershed, stream, rain and precipitation gauges operated and owned by IDNR-OWR and USGS are used to constantly record the inflow/ outflow of the lakes and corresponding river levels. The size and relative flatness of the watershed provides the opportunity for forecasting future flood

levels within the Chain of Lakes several days in advance. This forecasting capability can be used to help draw down the lake system several inches in advance of the main storm runoff.

In partnering with the local sponsors the Chicago District has proposed the installation of additional, pneumatic hinged-crest gates at both McHenry and Algonquin. These new gates will be a much needed operational tool which will add to the capability of drawing down the Chain of Lakes prior to peak storm events, when the natural headwater stages are not adequate because of the moderate river gradient. When in use it could increase the cross-sectional area flow over the dam by almost 1200-CFS. The hinge-crest gates being proposed are unique in that they are mechanically operated by the use of an inflatable air bladder, which will raise and lower the gate panels to obtain the flow capacity

needed. Each end of the inflatable gate will also be equipped with stainless steel heated abutment plates, to protect the operating equipment against the harsh winter weather.

The spillway of the existing McHenry Dam is approximately 221 ft. The proposed pneumatic hinged-crest gate will have a width of 50 ft. One challenging aspect of the installation of the pneumatic hinge-crest gate at McHenry Dam has been its location on the spillway. In Working closely with IDNR-OWR, it was felt that the best location for the pneumatic gate would be opposite of the shoreline which is used heavily by pedestrian traffic. This however, provided limited access to the offshore site because the opposite end of the spillway lies next to an island. Therefore, the contractor decided to use the spillway apron of the existing dam to gain access, which proved to be difficult considering downstream water level fluctuations put equipment under water and directly in the flow of the river. A cofferdam was then built in order to excavate the area needed to install the pneumatic gate in the existing dam, which has concrete strengths up to 18 ksi. These high strengths made concrete removal long and tedious for fear that the use of larger equipment might jeopardize the integrity of the existing dam. Excavation stopped approximately 16 inches before reaching the bottom of the dam. This was necessary in order to leave enough of the existing dam in place in order to tie the base of the pneumatic gate directly to it. This was successful because relief wells in the dam were installed in the area of excavation in order to relieve the uplift pressure that would be present when a thin slab of concrete was left at the bottom of the dam. The work on McHenry and Algonquin Dams are expected to total \$2 million dollars and be completed in August of 2001 and March of 2002 respectively.

Aquatic Nuisance Species Dispersal Barrier - The Chicago Sanitary and Ship Canal forms a unique, man-made link between the Great Lakes and the Mississippi River. The canal also provides aquatic nuisance species, such as the round goby, access between the two water basins. To protect the Mississippi River and Great Lakes ecosystems and economies, Chicago District in February awarded a \$1.2 million contract to Smith-Root, Inc. of Vancouver, Wash., to build an aquatic nuisance species dispersal barrier. The barrier will be located at river mile 296.25 on the Chicago Sanitary and Ship Canal, roughly between Romeoville and Lemont, Illinois.

The purpose of the project is to determine the effectiveness of a full-water column electrical barrier in preventing or reducing the migration of non-indigenous aquatic nuisance species between the Great Lakes and Mississippi River basins. This electrical barrier can be thought of as an impassible barricade consisting of electrical current through which water passes. The electrical circuit is produced when two or more metal electrodes are submersed in water with a voltage applied between them. Electric current then passes between the electrodes, via the medium of water, producing an electric field. It is important to note that one of the most important features of the Smith-Root fish barrier design is that the electric field is graduated. As the non-indigenous aquatic nuisance species move forward into the graduated electric field, they experience an increasingly unpleasant sensation. When the sensation is too strong, they are unable to advance further and cannot keep their body orientated with the water flow. They will then orientate themselves perpendicular to the electric field, and are either swept away by the current or swim away from the increasing electric field. Many design features will require innovative construction techniques in order to reduce costs, construction times and impacts to navigation, such as the implementation of a full-time diving crew to install a majority of the electrical barrier 28' below the surface of the channel.

The construction of a dispersal barrier demonstration project is an essential step in conducting the research needed to identify ways of protecting the Mississippi River and Great Lakes ecosystems and economies.

Nuisance species disrupt the balance of inland ecosystems by competing with native species for food, living space and spawning areas. Several aquatic nuisance species, such as the Round Goby and Zebra Mussel, have already made their way in 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. Barrier construction will begin in March, with completion expected in August 2001.

Other initiatives - Chicago District is very active in construction partnering. The district partners with all new contractors, and this partnering effort has been very beneficial in maintaining meaningful, open communication with our contractors in order to meet our challenges and execute the construction program. The partnering effort has been just as beneficial on difficult, problematic contracts as on contracts that have moved forward smoothly. Internal to the district, a very successful event has been the annual Post-construction (Lessons Learned) Conference attended by construction field staff, technical divisions staff, and project managers, to learn and share ideas based on the performance of prior year contracts, correcting problems and improving teamwork. Lessons learned are also shared on a continuing basis during the year within the project delivery teams.

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Update

ASCE INFRASTRUCTURE REPORT CARD

On March 8, the American Society of Civil Engineers (ASCE) issued its National Infrastructure Report Card.

The magnificent Golden Gate and Brooklyn Bridges; the Hoover, the Grand Coulee and other great dams and water systems of the west; our transcontinental railroads and unparalleled network of modern interstates; the airports, seaports, tunnels and transit systems that serve our cities - all of these are part of our nation's infrastructure.

A well-designed and maintained infrastructure anchors our economy and lifestyles and secures the public's health and well being. Investment in infrastructure is vital to our nation's productivity, competitiveness and economic success.

The 2001 Report Card for America's Infrastructure follows one released in 1998, at which time the ten infrastructure categories rated were given an average grade of "D." At the press conference, Mr. Robert W. Bein, ASCE President, stated "When you've got rolling blackouts in California, bridges crumbling in Milwaukee, and kids in Kansas City attending class in a former boys' restroom, something is desperately wrong."

For a copy of the full report card go to the ASCE web site at <http://www.asce.org/reportcard>.

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IMPORTANCE OF INSTRUMENTATION OF DAMS

After the 28 February earthquake in the Northwest, HQUSACE, the Northwestern Division, and the Seattle District took a look at the instrumentation of Dams. James Brown from the Corps of Engineers Center for automated Performance Monitoring of Dams talked to Steve Meyerholtz in Seattle District regarding their instrumentation at Howard Hanson Dam as well as at their other dams. (It appears that Howard Hanson Dam was their only problem).

The automation (mostly piezometers - but in the areas of greatest interest; ie: the abutment) was programmed for daily acquisition, read at 6 am (the quake was near 11 am). Steve was able to contact the system immediately by telephone from Seattle and reprogram the system for hourly and obtain a set of readings by query before they were kicked out of the Seattle District office building. They were able to do this for all their dams. As luck would have it (or should I say the budget priorities) Howard Hanson Dam is the only dam in the district that still uses SMA seismic equipment (analog), all others were SSA (digital).

When they got to the project site, they were able to monitor the instrumentation real time. Knowing the piezometric data from over 100 instruments under these types of (remote and local) scenarios is priceless. I would think that it is also priceless to have the institutional knowledge available for immediate understanding of the areas of concern for all their dams so they can determine where to concentrate.

All SSA's were called by phone by the USGS and accelerations were known within minutes for all dams except Howard Hanson Dam. Even expediting the information over a weekend did not get the Howard Hanson Dam SMA data reduced until the 5th day after the event.

The Seattle experience speaks volumes for the reliability of automating piezometers and the desire to update instrument systems as the projects age and the technology improves. Seattle has been one of our most progressive districts with regard to automation. Many others have not had the opportunity, the funds or other necessary circumstance to implement this level of monitoring. They would not fare as well under similar event conditions.

The information from Howard Hanson Dam is now being studied by the Engineering Research and Development Center to add to our knowledge of the performance of dams.

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ENERGIZING CONSTRUCTION PROJECT MANAGEMENT AT LOCK AND DAM 12

Technology is growing at a rampant pace. The question that could be asked is how quickly is the construction industry embracing technology? Unfortunately, the construction industry tends to lag behind in incorporating technology into the workplace. This article examines a construction project on the Mississippi River at Lock and Dam 12 in Bellevue, Iowa in which the construction team is utilizing cutting edge technology and partnering to improve the project. It looks at the methods employed and the ways in which these methods improve the project, both in house and additionally with the general public.

Introduction -- Every construction project is unique. Construction projects range from being easily built, to some projects being difficult to build. One common thread that is present in every construction project is the relationship that exists between the contractor and the owner. If the construction project happens to be a public project, the general public also becomes an integral part of

the project. Throw the contractor, owner, and general public into a construction project and one can say that the success of the project is often determined from the communication that takes place throughout the life of the project. Effective communication on a public construction project involves work. Utilizing today's computer technology to effectively communicate a construction project is new to the construction industry. The Lock and Dam 12 Major Rehabilitation project is utilizing state of the art computer technology as a communication tool.

Lock and Dam 12 is one of 29 locks of the Upper Mississippi River navigation system. The work being done at Lock and Dam 12 is part of a major rehabilitation program the Corps of Engineers, Rock Island District, began on the Mississippi River in the 1980s to replace deteriorating concrete, repair lock gates, and replace mechanical and electrical equipment. Lock and Dam 12 was placed in operation in 1939. As the structures and equipment approach the end of their projected lives, breakdowns and failure of equipment become more frequent and expensive, with resultant delays to river users. The work being done at the lock and dam will improve its efficiency, durability and reliability. The entire rehabilitation project is scheduled for completion in late 2003 at an estimated cost of \$42 million.

Lock and Dam 12 Major Rehabilitation Stage II was awarded to J. F. Brennan Co. Inc. from La Crosse, Wisconsin. The project kicked off with a partnering session between Brennan, the Corps of Engineers and the major subcontractors, Civil Constructors Inc. of East Moline, Illinois; Tri City Electric Co. of Davenport, Iowa; and Ostrom Painting and Sandblasting, Inc. of Rock Island, Illinois. Two of the goals identified at the partnering meeting were to maintain effective communication, and to minimize impact and establish a positive working relationship with the Bellevue community. The stakeholders realized that in order to meet the challenge of these two goals, computer technology could be utilized.

Through the use of a project web page, a project web cam, monthly partnering meetings and weekly progress meetings, the construction project team began to undertake its goals involving communication. Thus far the results have been encouraging. Surprisingly, the efforts required to achieve these results have not been substantial, costly, or time consuming.

In House Communication -- Communication is a key component of any project. In-house communication for the Lock and Dam 12 project involves the Corps of Engineers (construction, engineering, operations, contracting, project management and information management personnel); J. F. Brennan (construction, engineering and accounting personnel) and their subcontractors. Much discussion and coordination occurred on how to improve internal communication.

The first method used to improve internal communication, common throughout the construction industry, is the use of weekly progress meetings. Brennan is responsible for running these meetings. Brennan, the subcontractors, Corps of Engineers construction personnel, Corps of Engineers operations personnel, and Corps of Engineers engineering personnel, attends the meetings. The purpose of the meeting is to discuss a two-week schedule and discuss questions pertaining to the upcoming work. One advantage to the meeting is that it forces the contractor to plan out the next two weeks of work. Another advantage is that it prevents surprises and addresses problems or concerns up front. These weekly progress meetings generally last anywhere from ½ to 1 hour.

The second method of improving communications is monthly partnering sessions that are attended by the stakeholders within the Lock and Dam 12 project. In these partnering sessions each individual

stakeholder is given the opportunity to rate (from 1 to 5) the current status of the goals and objectives of the partnering charter. The goals developed by the stakeholders are schedule adherence, cost effectiveness, maintain effective communication, safety, quality, provide timely decisions, have fun, develop and maintain trust, and minimize impact to customer. A rating of 1 is considered adversarial/forcing/avoidance/self-interest. A rating of 3 is considered accommodating/compromising/moderate posturing. A rating of 5 is considered synergistic/collaborative/win-win/team interest. Open discussion takes place when two different stakeholders' ratings (in a category) vary by more than 1 point. The total average rating to date is 4.83, which shows the project is running smoothly and effective partnering is happening.

Computer Technology -- In the early stages of the construction project, the Corps of Engineers had a goal of establishing a web page for this project. It was believed this would be a very effective way to keep the public informed on the project progress. In order for the web page to become a reality, a variety of things needed to take place. First, communication would be essential between construction division and information management division. Second, construction divisions needed to update some of the tools their construction quality assurance representatives were using. A new digital camera was purchased and the construction trailer was networked directly to the main office. Third, decisions needed to be made on what to include on the web page and how often it should be updated. Last, the web page needed to be open to the public. The first load of dirt was excavated for the project in December 2000 and by mid-February 2001 the web page was online and open to the public. The site can be viewed at www.mvr.usace.army.mil/LD12/LD12.htm.

Another important communication tool being utilized at Lock and Dam 12 is a web cam. A state of the art video camera was mounted at the top of the lockmaster's building in January 2001. The live video of Lock and Dam 12 can be seen by accessing <http://12webcam/bti/>. This site is also linked into the Lock and Dam 12 website. The camera can be moved around and the focus can be zoomed over the Internet. However, a decision was made that only a few select individuals would have access to the password required to move the camera. The web cam has proved to be a valuable communication tool. From our construction area office in Davenport, Iowa (60 miles away), the construction project engineer can access the web cam from his PC and move the camera to the location desired to see clearly what construction activities are presently occurring. The live web cam is also advantageous in viewing the current job site conditions.

Another communication tool used for this project is called a Request For Information (RFI). The RFI, somewhat common to the construction industry, is a request document that asks for information or clarification on some aspect of the project. The contractor will fill out the RFI form and pass it along to the construction project engineer. This is accomplished mostly through email. During the partnering session, the team's goal is to answer all RFI's within 48 hours. So far to date, this goal has been met. The RFI also proves to be a great tool to document any changes or clarifications throughout the project.

Public Involvement Improvement -- Involving the public in a construction project takes some planning, preparation, and follow through. The lock and dam is located in the middle of downtown Bellevue. This is a high visible project. The effort a team puts into public involvement can yield some positive results. A well-informed community can, among many things, alleviate public relations problems.

Well before the project started public meetings were held in Bellevue. These meetings informed the townspeople of the scope of the project and calmed fears of the noise and detrimental impact this project was stereotyped as. Additionally, a groundbreaking ceremony and open house was held at the lock site immediately after the project was awarded. Present at the groundbreaking ceremony was Brennan, the Corps, the State of Iowa congressional representative, the mayor of Bellevue, all lock and dam personnel, and many from the community of Bellevue. The lock workers gave tours of the lock and dam and answered questions throughout the day. It is estimated that over 1,000 citizens took part in the ceremony and tours. The lockmaster at Lock and Dam 12 also provided photos and videos of the construction project that was aired on the local television channel on a monthly basis.

Both the web page and the web cam have proven to be valuable public relations tools. Let's face it; an informed community is better than an uninformed community. The construction management team approached public involvement with the idea that a web page and a web cam could educate the public. Lock and Dam 12 Major Rehabilitation is an exciting project and by showing the public construction project photos, short videos, live videos, fact sheets, budget details, etc., this can energize the community. Bellevue, Iowa is a community of approximately 2,500 people and this is the largest project this community has seen since the lock and dam was originally built.

As discussed earlier, one of the partnering goals is to minimize impact and establish a positive working relationship with the Bellevue community. One way in which the construction team improved public involvement, was by patronizing local businesses. The contractors purchased as much material locally as possible. The workers ate at local restaurants. Some of the workers stayed at local hotels or rented apartments. The atmosphere in town was one of excitement and enthusiasm (rather than anger and frustration) that this project was happening.

Finally, at the monthly Partnering meetings a public official from the City of Bellevue was invited to attend. Though a public official rarely attended the meetings, the public officials communicated through different channels that all were pleased with how the project progressed.

Conclusions -- In conclusion, by utilizing technology, partnering and other communication tools, the construction project management team for Lock and Dam 12 proved a couple of points. First, internal communications can be improved through the use of weekly progress meetings, partnering sessions, a web page, web cam, and other techniques. Second, public involvement and community attitudes can be improved by utilizing some of these same communication techniques. Initially, implementation of these communication techniques can seem overwhelming but it is really not. And almost every member of the construction, engineering and operations team will say it was worth it and can result in a successful construction project.

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CORPS-WIDE INFRASTRUCTURE SYSTEMS CONFERENCE

The U.S. Army Corps of Engineers (USACE) is sponsoring a Corps-Wide Infrastructure Systems Conference scheduled for 14-16 August 2001 in Reno, Nevada. The conference is directly related to Construction, Structural, Electrical, Mechanical, Materials, and Geotechnical Engineering. High participation and attendance by these disciplines, workload permitting, is recommended; however, USACE participation will be limited to the first 550 employees registered. Emphasis will be on the interactions of these disciplines as part of their district project delivery teams. There will be concurrent workshops available based on these singular disciplines. The conference will commence at

0800 on Tuesday, 14 August 2001, and continue through 1200 on Thursday, 16 August 2001. One or two field trip may be arranged for Thursday afternoon.

We are providing this advance information for planning purposes. Upon finalization of plans, additional information on the conference including the agenda, registration fee, hotel brochure and reservation information, and other topics, such as information on the City of Reno, Nevada, will be sent out.

A registration fee to cover official expenses will be required for the conference from each participant. The amount of the fee will be established and all participants will be notified for the charge when the final letter with pertinent details of the conference are finalized and distributed later this spring. The registration fee is reimbursable on the travel voucher and must be included on the TDY orders.

This conference is intended to give each attendee an excellent perspective on many of the current and future key engineering and construction issues and will provide a beneficial introduction to the latest projects, both Military and Civil Works, underway or recently completed.

The tentative topics to be covered at the conference are as follows:

Electrical/Mechanical

- 400 Hz Systems
- Non-linear Harmonics
- Electrical Systems Replacement - Folsom Dam
- HVAC Commissioning
- Sprinkle Design
- Stage Lift for Navigation Locks
- Voice over IP
- Lightning Protection UMCS
- Dam Controls
- Corrosion Control
- Heat Distribution Systems
- Aircraft Paint Hangars
- Turbine Efficiency Testing
- Self Lubricating Bushings
- Sustainable Design
- Radiant Heating
- Knowledge Management
- Resident Manager System (RMS)
- Condition Monitoring
- Pump Station Inspection
- Leak Detection
- Lifting Chains

Construction

- Design/Build
- S&A Test
- RMS Documents Checks SPS P2
- Submittals Prospect Classes

Guidance Update
Contract Closeout
QA Laboratories
A/E Resident Forum
DAWIA Safety
Alternative Contracts Forum

Structural

MP Criteria Overview
Reliability
CW Criteria Overview
Building Design and O&M
Risk
Innovation in Navigation Projects
MP Seismic
Gravity Dams and Materials
Cells and Walls
CW Seismic
Gates and Bridges
Piers and Footings

Innovative Geotechnology

Investigation Techniques
Embankment Stability
Geotechnical Risk
Seepage
Foundation Stability
Rehabilitation of Flood Control Structures
Concrete and Materials
Geotechnical Seismic Activities
New Project Activities
Geotechnical Quality Control and Testing
Military Geotechnical Projects
Geotechnical Policy and Guidance

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USACE/ACEC Leadership Meeting

The Chief of Engineers met with the President and Executive Director of the American Consulting Engineers Council (ACEC) on 20 Feb 2001. The leaders agreed on an updated partnering agreement (<http://www.usace.army.mil/inet/functions/cw/cecwe/notes/revagree.pdf>) to be signed by them at the ACEC Federal Markets Conference on 12 Mar 2001. The updated agreement places greater emphasis on value-based project delivery systems, collaboration in the global marketplace, and supporting both a healthy USACE and a strong engineering industry.

LTG Flowers discussed the USACE vision, which emphasizes the Corps' service to the nation and its reliance on the private sector to accomplish its missions. The two leaders agreed to work together on solving the nation's infrastructure problems. They also stressed the need to maintain effective communications between the two organizations. Other important topics discussed were the new USACE policy on Interagency and International Services, the Corps' response to the Army Inspector General report on the Upper Mississippi River study, and the Civil Works strategic plan and funding backlog. A full summary of the meeting is located at

<http://www.usace.army.mil/inet/functions/cw/cecwe/notes/summaryofmeeting20feb01.pdf>.

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UPDATE OF EP 715-1-4

[Engineer Pamphlet 715-1-4](#) (click to open), which advises architect-engineer firms how to seek work with USACE, has recently been improved and revised. The title has been changed to "Competing for Architect-Engineer Contracts Awarded by the U.S. Army Corps of Engineers" to be more powerful and descriptive. This is a very helpful document for A-E firms who have never worked for the Corps or the Federal Government, and is useful at small business fairs and other outreach events. You can order a reasonable quantity from the USACE Publications Depot.

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Dam Safety

NDSP SEMINAR - INSPECTION, INTERPRETATION, AND FOLLOW-UP

The annual National Dam Safety Program Seminar was held 21-23 February 2001 at the National Emergency Training Center, Emergency Management Institute in Emmitsburg, Maryland. Outstanding speakers presented the latest technical information on inspection, interpretation, and follow-up for dam safety. For the first time the seminar was other subscribed with over 300 people registered. 75 individuals from the U.S. Army Corps of Engineers attended the seminar and five individuals presented papers at the event. This seminar is also an excellent training event, which is fully funded by the National Dam Safety Program thereby allowing it to be tuition free.

Watch for information in the newsletter about the 2002 seminar that will be held February 20-22, 2002, in Emmitsburg.

POC: CHARLES PEARRE, CECW-EIS, 703-428-7343

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SIXTH BENCHMARK WORKSHOP ON NUMERICAL ANALYSIS OF DAMS

The Ad Hoc Committee on Computational Aspects of Analysis and Design of Dams of the International Commission on Large Dams (ICOLD) organizes Benchmark Workshops to provide a critical examination of the computational methods and software used for dam analysis. For this purpose problems typical in dam analysis are formulated and the participants are encouraged to solve the problems and to provide the solutions for critical evaluation during the workshops. Further activities like poster sessions or round table discussions are also part of the workshops. Proceedings of the workshops are available and can be used for further benchmarks of individual software.

Up to now, workshops were held in Bergamo (1991 and 1992), Paris (1994), Madrid (1996) and Denver (1999). The themes of these workshops cover a wide range of problems typical for the static and dynamic analysis of concrete and embankment dams. The Sixth International Benchmark Workshop on Numerical Analysis of Dams will be held on October 17-19, 2001 in Salzburg, Austria. It is again organized by the ICOLD Committee on Computational Aspects of Analysis and Design of Dams and is sponsored by the Austrian National Committee, by Verbundplan and by Verbund-Austrian Hydro Power.

For the 6th Benchmark Workshop three themes have been developed, two themes concern the structural analysis of dams and the third one deals with the interpretation of measurement results. The two dam-analysis problems cover subjects of great importance and current interest, namely the evaluation of alkali-aggregate-reaction phenomenon and the analysis of a concrete faced rockfill dam. The third theme is directed towards dam supervision and is aimed to provide a stronger link between the observed and the modeled structural behavior. With these themes, the workshop will be beneficial not only for dam professionals involved in dam design and analysis but also for those dealing with dam surveillance. In addition to the presentation of the themes by the formulator and the discussion of the results provided by the participants, state-of-the-art lectures, a poster session and a round table discussion will also be arranged for the workshop. The lectures will deal with the three themes from the analytical as well as from the practical point of view. The poster session is open to participants interested to present case studies and research activities generally related to mathematical modeling for dam analysis and design. The opportunity for discussion of the poster presentations will be provided.

Practical aspects of dam construction and supervision will be the target of the one-day tour through the "Zillertal / Tyrol" to Schlegeis Arch Dam, which is the subject of the third theme.

Technical Themes -- Three themes are formulated for the 6 Benchmark Workshop, Theme A is focused on the structural analysis of concrete dams and Theme B on the analysis of embankment dams. The third problem (Theme C) deals with mathematical modeling for the interpretation of measurement results. The problems have been formulated by different organizations; they have been examined and approved by the Committee.

Theme A: Concrete Dam -- Evaluation of Alkali Aggregate Reaction (A.A.R.) effects on the structural behavior of an arch dam: interpretation of the measured behavior and forecasting of the future trend. -- Formulator: ENEL-Hydro, Milan, Italy

Theme B: Embankment Dam -- Prediction of the deflection of the upstream face of a Concrete Faced Rockfill Dam (C.F.R.D.) during its first impounding. -- Formulator: Coyne & Bellier, Gennevilliers, France

Theme C: Interpretation of Measurement Results -- Interpretation of measurement results for Schlegeis Arch Dam starting from the simplified model used in the 5 B.W. -- Formulator: Verbundplan, Salzburg, Austria

The General Technical Secretariat for all matters as registration, programs, poster session, proceedings etc. is located at Verbundplan in Salzburg:

Verbundplan

Attn.: Ernst Aigner
Rainerstrasse 29,
A-5020 Salzburg, Austria
Phone: +43 662 8682 22350
Fax: +43 662 8682 122350
E-mail: AignerE1@verbundplan.at

This secretariat is also responsible for technical questions regarding Theme C and distribution for input data of all Themes. For Theme A and B direct contact with the formulator is recommended for all technical matters related to these themes as e.g. questions concerning the problems and submission of results.

For Theme A:
ENEL-Hydro
Attn: Gabriella Giuseppetti
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For theme B:
Coyne & Bellier
Attn: Alain Carrere
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Phone: +33 1 4185 0369
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E-mail: alain.carrere@coyne-et-bellier.fr

Language -- The official language of the Workshop will be English.

Registration Fee -- The registration fee will be in the order of € 500,000. It will include the proceedings, attendance in all workshop sessions, the one-day tour, three lunches, one dinner and the coffee breaks.

How to Participate -- Prospective Participants for one or more Benchmark Themes and for the Poster Session are asked to contact the General Technical Secretariat. Dam Engineering Professionals, who will attend the Workshop and participate in the discussion, are also welcome. They are asked to contact the General Technical Secretariat for the Final Program. An Internet web page is available under the address www.verbundplan.at/benchmark. The Registration Form will be included in the Final Program.

POC: ROBERT BANK, CECW-EWS, 202-761-4243

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NATIONAL DAM SAFETY DAY

The support of the public awareness portions of the National Dam Safety Program, FEMA will sponsor a National Dam Safety Day program on Thursday, 14 June 2001, at the National Press Club in

Washington, DC. District Dam Safety Program Managers are encouraged to work with their Public Affairs Office to public Dam Safety publicity and public events during the week of 10 June 2001. Additional information on the planned events in Washington will be in future issues of this newsletter.

POC: CHARLES PEARRE, CECW-EIS, 703-428-7343

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Information

OPINION COLUMN: CORPS OF ENGINEERS COMMITTED TO OPEN, THOROUGH STUDY PROCESS

I was surprised the other morning when I opened the Morning News and discovered an editorial concerning the U.S. Army Corps of Engineers. As commander of the Savannah District my first reaction was, "Why did the [Savannah Morning News](#) blind-side us on this?"

I realize, however, that the editors are in no way responsible for informing me about negative editorials. It did get me thinking that a lot of residents of the Coastal Empire might be forming opinions about the Corps and the Savannah District simply on the basis of that one editorial. Rather than leaving readers with the impression of a monolithic bureaucracy, I believe it is important for residents of the area to be able to put a face on the Savannah District.

First, a little about the Corps of Engineers. We are the nation's premier federal engineering agency and a major Army command comprised of approximately 35,000 civilian and 650 uniformed professionals. Our mission is to provide engineering and management services in support of national defense and development of national water resources.

Specifically, we design and manage construction for the Army and Air Force, plan, design, build, operate and maintain water resources projects, respond to disasters and emergencies, protect wetlands, and restore the environment, cleaning up hazardous waste and munitions on current and formerly used defense sites.

The Corps has had a presence in Savannah since 1829, building Fort Pulaski. We are justly proud of our long heritage in helping build this great nation. Today, as the sixth largest employer in Savannah, we provide almost \$50 million in salaries to the community every year. In 2000, our 600 Savannah-based team members donated more than \$32,000 to helping organizations through the Combined Federal Campaign.

Our education partnerships are helping build a better future for our youth. We partner with [Savannah State University](#), Sol C. Johnson High School, May Howard Elementary School's SEARCH Class, and Hodge Elementary School.

Our employees are active in a host of civic and service organizations. Our Military Design Construction mission is our largest by far, covering North and South Carolina as well as Georgia. Our projected design and construction workload at Army and Air Force installations through 2003 is approximately \$1.5 billion. We are currently managing the design and construction of new barracks and a medical/dental clinic at [Hunter Army Airfield](#).

Our Civil Works or water resources mission encompasses about half of Georgia and a portion of South Carolina. Authority for all of our civil works projects is found in congressionally enacted public law.

Most projects require local sponsorship with the local sponsor assuming a percentage of the cost. Our projects equally emphasize economic growth and environmental stewardship. A local example is the Lower Savannah River restoration project. In partnership with the City of Savannah, we are restoring a portion of the Savannah River to its natural configuration, removing navigation cuts or channels no longer used by commercial barges.

Benefits include restoration of wetlands in the Savannah Wildlife Refuge and improved water quality and quantity at the city's industrial water supply intake. We are creating wildlife habitat (primarily waterfowl) in a portion of our dredge disposal areas as part of our management of Savannah Harbor. A small flood control project on Harmon Canal will reduce chronic flooding problems for many residents of the southside. Of course, as witnessed by the editorial that prompted this article, the proposed Savannah Harbor deepening is one of the more controversial projects the District has been involved in of late.

This project, undertaken and funded by the [Georgia Ports Authority](#), was authorized by the Water Resources Development Act of 1999 and subject to some very specific and extraordinary conditions. The project, authorized by WRDA, may be carried out (1) only after the Secretary of the Army has approved an Environmental Impact Statement (EIS) for the project, and (2) the Secretary of Interior, the Secretary of Commerce, the Administrator of the Environmental Protection Agency (EPA), and the Secretary of the Army all must approve the project's environmental mitigation plan.

Whether intentionally or unintentionally, the Morning News implied that the professional staff of the Savannah District might not be able to do a fair and equitable job of reviewing the project as it moves through the process. As my employees are some of the finest professionals in government today, I must take exception.

The record clearly demonstrates the Corps' commitment to allow this project to proceed to construction only when the project complies with all applicable policies, procedures and regulations, contains an acceptable mitigation plan, and has all the required environmental approvals. I am committed to participating in an open and thorough study process with full public and agency involvement.

The Corps will be the recipients and managers of whatever project may eventually (if ever) be constructed and wants it to be economically feasible while reducing environmental impacts to the absolute minimum.

For additional information about the Savannah District, our programs and our people please visit us on the World Wide Web at <http://www.sas.usace.army.mil>.

POC: COL JOSEPH K. SCHMITT, CESAS-DE, 912-652-7522

(Editor's Note: This article written by COL Schmitt appeared as an Opinion Column in the Savannah Morning News on January 13, 2001.)

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2001 GSA AWARD COMPETITION ANNOUNCED

GSA has now announced requirements for their 5th Annual GSA Achievement Award for Real Property Innovation. This is a great award because, in addition to fame, a crystal trophy and nice

picture, it comes with a cash award -- \$5000 for an individual, or \$10,000 for a team effort. (This is the award won last year by the ACSIM privatization team.)

Instructions for the competition are available on the GSA Real Property site (http://www.gsa.gov/attachments/GSA_PUBLICATIONS/pub/2001awdentry.pdf). Complete the form and answer the following questions in five pages or less.

1. Describe the policy or practice. Emphasize its creativity and explain how it demonstrates originality, and innovation. Tell how the innovation is manifested and how it was or can be validated.
2. Explain the background of the organization and the circumstances that led to development of your best policy or best practice.
3. List the most significant achievements of the policy or practice. Explain the benefits or results, especially cost to implement vs. cost savings, if data are available. Provide substantive documentation as well as examples (cost and/or time saving, organizational efficiencies, customer satisfaction, employee productivity, sustainability, etc.).
4. Identify the problem(s) or challenge(s) your innovative policy or practice addresses. Were there challenges to be overcome during its development and/or implementation?
5. Show how replicable the policy or practice is. Describe its transferability or the degree to which it shows promise of inspiring successful replication by other Federal agencies and governments.
6. Summarize how your policy or practice is consistent with the "Federal Asset Management Principles".

The application deadline is 15 June 01.

POC: RICK WIANT, CEMP-IP, 202-761-5788

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JOB VACANCIES

This month there are a large number of position announcements in the system. The locations range for HQUSACE to New England to Korea. In order to help our engineering and construction team members keep up with the open positions we recommend the use of the vacancy notification system (VACNOT).

The VACNOT is operational again. You may recall, VACNOT was deployed last year to notify careerists in career program CP-18 Engineers and Scientists (Resources and Construction), and USACE CP-55, Real Estate, of vacancy announcements when central referral inventories for these career programs were disestablished. Unfortunately, shortly after deployment there were a number of problems and the system has not been functioning for months. VACNOT is a voluntary registration system that enables individuals to register for up to five series in any location. Since the system was designed for CP-18 and CP-55, the first four fields are reserved for series covered by these career programs. The fifth field accommodates all other series, to include the 340. VACNOT interfaces with the Department of Army vacancy announcement web site, www.cpol.army.mil, to notify employees via e-mail when a vacancy for which they are registered is published. Instructions for registering are at

www.cp18and55.net. Because of all the problems with the system since its initial deployment, those who registered previously will need to re-register.

The following positions are highlighted at the request of the various organizations listed.

Vacancies in the Far East District (Korea)

Hospital Resident Office Vacancies -- The Hospital Resident Office, Far East District located at the U.S. Army Community Hospital - Seoul (121st General Hospital) on Yongsan Army Garrison, Seoul, Korea, is recruiting to fill four vacancies. The vacancies are for field engineers and quality assurance representatives, with hospital experience, responsible for providing quality assurance for the 121st General Hospital Project. The project is a major addition to, alteration of and renewal of the 121st General Hospital. The vacancies are all GS-12 and are for an Electrical Engineer, Mechanical Engineer, Interdisciplinary Engineer (office engineer), and a Construction Representative.

These vacancies are two-year accompanied tours in the metropolitan Seoul area, with the potential for voluntary extension beyond the two-year period. The accompanied tour permits the DOD employees access to K-12 DoD DS schools with US educational standards, US college branch offices, shopping at the finest Commissary overseas with a selection comparable to any typical US grocery chain, shopping at the Post Exchange with a selection comparable to most US retail department stores, all located on Yongsan Army Garrison. Seoul is a large bustling urban area with an excellent public transportation system, many outstanding cultural events and facilities, and has convenient access to many outdoor recreational facilities. Housing is available off post, convenient to the installation and there is a large selection of many modern apartment areas from which to choose, well within the Living Quarters Allowance for rent and utilities.

For administrative information and assistance, contact Fred Davis at POF. For technical and other job-related information, contact Norman R. Boeman, Resident Engineer, CEPOF-CD-H. See the Web site at <http://www.pof.usace.army.mil> for more information about the Far East District. You may submit your resume via RESUMIX by following the instructions found at <http://www.cpol.army.mil/va/scripts/public.html>.

Resident Engineer Positions -- The Far East District in Korea has an ever increasing military construction program. The Construction Division will soon be recruiting to fill two GS-13 Resident Engineers positions, both of which are for a two-year command sponsored tour. One position is the Chief of the Northern Resident Office located in Seoul, while the second is the Chief of the Southern Resident Office located in Taegu. Both of the incumbent RE's were just recently selected for promotion to GS-14 Area Engineers. These are high profile RE positions in the military construction arena that provide both the visibility and opportunity for continued professional growth, while becoming highly competitive for future assignments. Watch for these announcements on <http://www.cpol.army.mil/va/scripts/public.html> in republic of Korea. Submit your resume via RESUMIX per the instructions at the above site.

Vacancy in the New England District

Chief, Engineering/Planning Division -- The New England District has advertised for a GS-15 position as Chief of their Engineering/Planning Division. A copy of the full job announcement can be found at www.cpol.army.mil by entering the number shown below under the Employment

Opportunities section, Army Vacancy Announcements. The New England District is located in Concord, Massachusetts, near Boston. As Chief of Engineering/Planning the individual manages the work of the Division through two or more levels of subordinate supervisors. Directs a large workforce employed in a wide variety of professional, technical, administrative and clerical occupations engaged in water and related land resource and environmental engineering/planning and design or a road spectrum of civil works; military projects and the remediation of hazardous, toxic and radiological waste sites.

The announcement numbers are **FUC010108** for a "Temporary NTE 180 Days" and **FUC010109** for the Permanent position. Both announcements are for an Interdisciplinary, Supervisory Position in series 0810, 0110, 1301, 0020, 0808, 0830, 0850, or 0401, at the GS-15 level.

Vacancy in the Engineering and Construction Division, HQUSACE

Cost Engineer -- HQUSACE is recruiting for a GS-14 Cost Engineer position (Cost and Economic Team) at HQUSACE, Engineering and Construction Division is under way. The announcement Number is NCR1604-01-CH. Position details and the application procedure is listed at web address <http://www.cpol.army.mil>. Please insure that any eligible cost engineers within your Divisions, Districts or Offices are aware of this recruitment action and have the opportunity to apply. The position duties include serving as construction cost engineering specialist in development of cost engineering data and estimates for the annual program of military and civil works construction. Also, working as a construction cost engineering consultant and specialist for development of computer-aided applications in the field of cost engineering and the development of cost engineering estimates for assigned international military and civil works construction projects.

Vacancies in the Seattle District

Architect -- The Seattle District is recruiting for an Architect, GS-808-13, in their Engineering/Construction Division, Design Branch, Architecture/Structures Section, in Seattle, Washington. The position duties include serving as a Northwest Division (NWD) wide expert in architectural design; and serves as a Seattle District senior specialist and leader in architectural design. Designs generally are either prepared by one of five Districts within NWD, or by Architect-Engineer (A-E) firms. Projects typically are within the geographic area of NWD. The area is characterized by complex and diverse climate, soil and foundation conditions. Parts of the region are subjected to significant seismic activity. Assignments involve Civil Works and military projects. Military designs reviewed cover a large variety of buildings--barracks, child care facilities, medical clinics, family housing, maintenance facilities, special test facilities, etc. Civil works designs include such projects as visitor and maintenance facilities, warehouses and recreational facilities. As a recognized regional technical specialist in architecture design, focuses on specific architectural features such as appropriateness of architectural style, structural compatibility, functional layout, siting, type of building construction (materials and methods) and DOD design criteria.

Mechanical Engineer -- The Seattle District is recruiting for a Mechanical Engineer, GS-830-13, in their Engineering/Construction Division, Design Branch, Electrical/Mechanical Section in Seattle, Washington. Representative skills required for successful performance in this position include but are not limited to mechanical engineering/design, CADD, HVAC and machine design. The position duties include serving as staff specialist in the Electrical-Mechanical Section of the Seattle District office in planning, designing, and coordinating mechanical engineering activities for civil works, military

works, and work for others. The employee's expertise covers a wide range of professional engineering work requiring superior knowledge in the fields of mechanics of materials, fluid mechanics, thermodynamics, and control theory. Performs other duties as assigned.

Electrical Engineer -- The Seattle District is recruiting for an Electrical Engineer, GS-830-13, in their Engineering/Construction Division, Design Branch, Electrical/Mechanical Section in Seattle, Washington. Representative skills required for successful performance in this position includes but is not limited to electrical engineering/electrical design and Microstation CADD. The position duties include serving as the District's technical specialist in electrical design and construction. Designs generally are either prepared within the District or by Architect-Engineer (A-E) firms. Projects primarily are within the geographical areas of the District and NWD. Assignments are complex and diverse and involve Military Construction projects, HTRW, Civil Works, and Support for Others. Military construction projects cover a large variety of buildings-barracks, child care facilities, dental/medical facilities, family housing, special test/maintenance facilities, munitions storage facilities, Army Reserve Centers, aircraft hangars, aircraft control/warning stations, radar units, fire stations, multistory administration buildings, commissaries, tactical maintenance shops, sewage disposal plants, and other electrical related utility systems. Civil Works projects include hydroelectric power plant facilities, multipurpose dams, pump stations, reservoirs, channels, levees, water control and conveyance facilities. As the recognized technical specialist in electrical design, the position focuses on specific electrical engineering features such as exterior overhead and underground electrical power distribution; interior building lighting and power; street and floodlighting; airfield night and navigational lighting; electrical generator installations for critical light and power requirements for hospitals, security purposes and other critical facilities and structures; fire alarm system; electrical light, power and control installations for dams and other civil works projects; communications/signal circuits, networking, and television systems; energy monitoring and control systems (EMCS); cathodic protection system; intrusion detection system; control systems; public address, intercommunications and other sound reinforcement systems; lightning protection system; and grounding system.

Resident Engineer -- The Seattle District is recruiting for a Supervisory Interdisciplinary Engineer, GS-810/830/850-13, as the Resident Engineer in their Engineering/Construction Division, NW Area Office, Eastern Environmental Resident Office in Kellogg, Idaho. Representative skills required for successful performance in this position include but are not limited to construction management, environmental, contract administration and construction quality assurance. The duties include serving as the Resident Engineer with direct responsibility for field and office engineering work associated with the construction program assigned to the Eastern Environmental Resident Office. Supervises the Resident office engineering staff and work operations at a variety of HTRW and civil works at dispersed sites. Applies full professional engineering knowledge together with practical knowledge of construction methods and techniques in accomplishing assignments. Assigned projects vary in type and size, but can be characterized by their variety; the use of accelerated schedules; the need for new and specialized equipment, materials and methods; considerable site layout and foundation preparation problems, to include unforeseen site conditions and limited accessibility; and hazardous, toxic and radiological waste (HTRW) considerations and/or dealings and coordination with a variety of interested parties, e.g., contractors, Environmental Protection Agency contractors, local and national Government officials and elected representatives, federal state and local environmental agencies (e.g., Idaho/Montana State Department Environmental quality, Idaho/Montana Department of Fish and Game, USFWSL, OSHA, and Couer d' Alene Indian Tribe and special interest groups. Construction is performed under rigid completion schedules and requires strict adherence to safety standards. Projects usually entail multi-million dollar expenditures.

Resident Engineer -- The Seattle District is recruiting for a Supervisory Interdisciplinary Engineer, GS-810/830/850-13, as the Resident Engineer in their Engineering/Construction Division, NW Area Office, Mountain Home Resident Office at Mountain Home AFB, Idaho. Representative skills required for successful performance in this position include but are not limited to construction management, contract administration and construction quality assurance. The position duties include serving as the Resident Engineer with direct responsibility for field and office engineering work associated with the construction program assigned to the Mt. Home Resident Office. Supervises the Resident office engineering staff and work operations at a variety of geographically dispersed subordinate project offices. Applies full professional engineering knowledge together with practical knowledge of construction methods and techniques in accomplishing assignments. Assigned projects vary in type and size, but can be characterized by their variety; the use of accelerated schedules; the need for new and specialized equipment, materials and methods; considerable site layout and foundation preparation problems, to include unforeseen site conditions and limited accessibility; and hazardous, toxic and radiological waste (HTRW) considerations (e.g., soil contamination removal of underground storage tanks with unknown contents, asbestos removal with concurrent operations, Superfund sites with unknown contaminate mixes); and/or dealings and coordination with a variety of interested parties, e.g., contractors, local sponsors, local and national government officials and elected representatives, federal, state, and local environmental agencies (e.g., EPA, water quality boards, air quality board, county health department), private and commercial landowners, and special interest groups. Construction is performed under rigid completion schedules and requires strict adherence to safety standards. Projects usually entail multi-million dollar expenditures.

Senior Field Engineer -- The Seattle District is recruiting for a Civil Engineer, GS-810-13, in their Engineering/Construction Division, NW Area Office, Air Force Academy Project Office, in Colorado Springs, Colorado. Representative skills required for successful performance in this position includes but is not limited to project engineer and construction management. The position duties include serving as senior engineer in the Air Force Academy Project Office, Northwest Area Office, leading and coordinating a workforce of professional engineers and construction representatives exercising wide-scope monitoring, inspection, control of civil, mechanical, electrical and environmental components of Military construction projects including the Renovation and Addition to the Air Force Academy Athletic complex. This project is a design-build contract with an accelerated schedule, tight fiscal constraints, and with anticipated changes due to differing site conditions on the alteration portion. The project is estimated at \$30 Million. The project site is highly visible, as the entire student body of the USAFA will be using the existing/altered facility daily during the construction phase. In addition, the existing/altered facility is also home to the US Olympic training center. Other assigned projects vary in type and size, but can be characterized by their variety; the use of accelerated schedules; the need for new and specialized equipment, materials and methods; considerable site layout and foundation preparation problems, to include unforeseen site conditions and limited accessibility. There are numerous contractors and customers involved with each project, increasing the complexity and extent of coordination with field forces on day-to-day activities as well as those instances where deviations are required from contract plans and specifications. Military work is highly visible within the Defense hierarchy and is politically and environmentally controversial.

Apply for any of the above positions with the Seattle District by using the RESUMIX procedures found at <http://www.cpoc.army.mil/Home/WestCPOC.htm>.

Vacancy in the Pittsburgh District

Civil Engineer -- The Pittsburgh District is recruiting for a Civil Engineer, GS-0810-13, in their Operations and Readiness Division, Readiness Branch, in Pittsburgh, Pennsylvania. The duties include serving as the technical authority and principal advisor to the District Commander on emergency and disaster preparedness, response, and recovery activities associated with both natural/technological disasters and national emergencies. The individual directs the Inspection of Completed Works (ICW) program. Performs as an ESF 3 team leader in support of USACE national ESF 3 Cadre which when directed represents the MSC and/or District Commander for coordination with FEMA/State officials in accepting and accomplishing missions relating to the Federal Response Plan (FRP). The position requires extensive experience in managing multi-faceted programs, directing the work of technical teams comprised of diverse engineering and scientific personnel and a working knowledge of Corps organizational structure, as well as the Corps capabilities and authorities relating to its readiness missions. Develops the local policy guidance for the formulation and implementation of the Districts Natural Disaster Program. Serves as member of District Dam Safety Committee, District Drought Monitoring Committee, and with the chief of Operations and readiness Division, represents the District on EPA Regional Response Team for hazardous material spill response. Coordinates Dam Failure notification and evaluation plans with state and county emergency management agencies to ensure compatibility and operational response. Incumbent is required to become certified as an ESF 3 Team leader and provide direct support to the HQUSACE National ESF 3 cadre. Incumbent will demonstrate sound technical judgment, tact, imagination and resourcefulness in handling diverse emergency situations, and in dealing with high-ranking officials. Ensures that District PRT is properly staffed and trained. Assures that Functional Team (FT) members are properly trained and readied for rapid activation and deployment based on direction from higher headquarters. Responsible for the Districts readiness planning and activities for its responsibilities in support of the CELRD Catastrophic Disaster Response Plan for the New Madrid Earthquake Zone. Manages the Districts inspection program for 39 Corps constructed, locally maintained flood protection projects and 41 emergency streambank protection projects. Approves engineering aspects of permit requests by local municipalities for alterations to original project design. Directs the Districts maintenance program for the Johnstown, Elkins, and Punxsutawney projects. Directs the eligibility inspection program for 40 nonfederal flood control works. Eligibility rating is acceptable or unacceptable for government assistance for repair of major flood damage. Technical assistance is provided sponsor in obtaining and maintaining an acceptable rating. Reviews engineering investigations and technical analysis prepared by interdisciplinary professional teams and recommends approval/disapproval of proposed rehabilitation of flood damaged projects. The individual exercises significant responsibilities in dealing with officials of other units or organizations; develops performance standards and evaluates the performance of subordinates; makes selections; hears and resolves grievances or serious employee complaints; prepares and recommends disciplinary actions involving employees; identifies training needs; approves grade increases, overtime, employee travel, awards, and leave. During disaster deployments, assumes the supervision responsibility for responders fulfilling duties under response missions.

The Army Vacancy Announcement Number for this position is GB011388. RESUMIX procedures through the North Central personnel center at ATTN SFCP-NCS (RESUMIX), 1 Rock Island Arsenal Rock Island, IL 61299-7650.

Vacancy in the Baltimore District

Civil Engineer -- The Baltimore District is recruiting for a Civil Engineer, GS-0810-13, in their Construction Division, Central Washington Area Office, in Washington, DC. The duties include serving as team leader, office engineering, responsible for office engineering and contract administration in an Area Office that is responsible for supervising two or more geographically separated field offices. As such, is responsible for administering all activities assigned in the geographical area of the Area Office. Projects include the construction of a wide variety of specialized and conventional structures and facilities. Unusual difficulties and critical construction management problems arise due to close proximity of projects to important Government Centers. Major construction projects are performed in close proximity in the Nations Capital area and special attention has to be given to public relations, as well as to contract administration and insuring contractor quality control program functions effectively. Projects include the construction, rehabilitation and/or renovation of a wide variety of specialized and conventional structures and facilities in the DC Schools Capital Improvements Programs. The position performs office engineering functions and supervises office engineering personnel in reviewing contractor submittals, checking shop drawings, computing quantities, preparing contractors payment estimates, preparing contract change documents including cost estimates and contract modifications, maintaining contract management control registers and systems, resolving construction/design related problems, preparing periodic reports required by higher authority, preparing draft correspondence, and monitoring contractors contract management including compliance with specified quality, progress and accident prevention management programs. Supervises the receipt, review, and storage of samples of construction materials submitted for approval by contractors. Supervises the maintenance of official contract files and contract documents. Establishes and maintains a technical resource library for the Area Office. The position is responsible for monitoring and evaluating contractors contract management performance. The individual coordinates and initiates corrective action within prescribed policy. Reviews and interprets the requirements of contract documents including plans and specifications. As work progresses, discusses details of construction with contractor personnel and with design personnel. Authorizes changes within prescribed limitations, coordinating such authorization with Area Engineer. Coordinates with design personnel and architect-engineers, evaluating performance in submittal review and design related consultation. On matters that are controversial or require technical decisions, consults appropriate sources including technical references, specifications, District technical sources and design personnel in formulating recommended courses of action. Participates in negotiation of contract modifications, is responsible for contract fund control, and is responsible for claims management. Coordinates with contractors, using agency's higher authority, local officials and the public as necessary, and refers to appropriate Area or Corps action elements. Is responsible for management of contract changes, modification, and claim actions. Evaluates requirements and requests for changes; develops change modification documents to include descriptions, findings of fact and government estimates; negotiates authorized contract cost and time changes; and makes recommendations concerning justification, necessity, and impact of all proposed changes, authorized changes, and negotiations. Investigates and evaluates all claims, recommends and initiates appropriate action. Maintains procedures for timely resolution or advancement of contract changes and claims in accordance with established management policies, and maintains procedural controls to assure proper authorization for all changes.

The Army Vacancy Announcement Number for this position is GE01428192. RESUMIX procedures will be used through the Northeast CPOC, Resumix Project Office, 314 Johnson Street, Aberdeen Proving Ground, MD 21005-5283.

Vacancy in the Pacific Ocean Division

Civil Works Program Manager -- The Pacific Ocean Division is recruiting for a Civil Engineer (GS-0810), Economist (GS-0110), Biologist (GS-0401), General Engineer (GS-0801), Environmental Engineer (GS-0819) at grade 13 in their Directorate of Engineering Technical Services, Engineer-Planning Division, at Fort Shafter, Hawaii. The duties include serving Civil Works Program Manager in the Directorate of Engineering and Technical Services (DETS) responsible for providing staff advice, assistance and review of the Divisions Civil Works program management including planning, engineering, construction and operations and maintenance. Provides project management support to the Districts through staff level oversight and interaction. Reviews Districts programming and budget documents; project and study cost estimates; and design and construction schedules and recommends improvements or approval. Perform a wide range of current year and multi-year programming and funds management in support of the Divisions Civil Works program. The Civil Works program directly supports and affects public water resources planning, engineering, construction, operation and maintenance, and regulatory functions. Provides oversight and staff level review and evaluation of water and related land resource program management for assigned studies, engineering, construction, and OM mission in the Pacific Ocean Division region. Provides program management expertise and guidance to key operating officials and counterparts at the district and Division levels, higher headquarters, other government agencies and private interests. Provides interim program management guidance pending full policy development or interpretation by HQUSACE for assigned activities. Serves as CEPOD's spokesperson for program management of the CW program between POD and HQ USACE. Functions as the CW programs staff consultant for the Districts, the Division Commander, the Director of DETS, the Division PRB and other Division staff. As the CEPOD's CW program management expert, responds to requests for information on technical and program data to include engineering and economic issues, costs, program changes trends, and similar matters regarding the CW program. Reviews district budget proposals, assists the DETS in developing the planning program budget and defending the Civil budget. Organizes conferences on water and related land resource planning matters attended by Washington-level representatives, including Reconnaissance Review Conferences (RRC), Issue Resolution Conferences (IRC), Alternative Formulation Briefings (AFB) and Feasibility Review Conferences (FRC). Participates with district, division and HQUSACE representatives in preparation of guidance memoranda. Prepares and briefs the Division Commander on the monthly HQUSACE CW Programs Review Board, the Quarterly HQUSACE Command Management Review and the POD Regional Management Review. Develops and issues guidance to subordinate districts on program development, defense, and execution. Presents the CW program at the Quarterly POD Program Review Board (PRB) meeting. Conducts project briefings at the POD PRB meetings to present program status and recommend the POD position for PRB approval. Makes recommendations on program development, to be reflected in annual revisions of program and budget estimates. Conducts periodic field visits of on-going construction projects and proposed project sites to gain knowledge of current or proposed activities; and attend technical meetings, as required, to represent program development knowledge required in the Civil Works programming function. Monitors customer satisfaction with district planning and associated environmental products, and district conduct of CW program for all assigned activities.

The Army Vacancy Announcement Number for this position is 53EW024999. RESUMIX procedures through the U.S. Army Pacific, APPE-CP-OC-PS (RESUMIX), Bldg. 56, 600 Richardson Drive, Fort Richardson, AK 99505-6700.

Vacancy in the Transatlantic Program Center

Resident Engineer - Fayid, Egypt -- The Transatlantic Program Center is recruiting for a Supervisory Civil Engineer (GS-0810), GS-13 in their Egypt Projects Office, Fayid, Egypt. Serves as the resident engineer in responsible charge of field construction activities at various construction sites of the Egypt Projects Office. This program involves new air base construction and rehabilitation of some existing facilities. These facilities will consist of aircraft shelters, runways, maintenance and support buildings and all functions required to support a full squadron of aircraft. Supervises and directs, through subordinate personnel, the accomplishment of the following field and office engineering functions in accordance with EP-451-1, the Resident Engineers' Management Guide, and applicable TAC regulations. Reviewing project plans and specifications for familiarity and use in participating in pre-work conferences with contractor to inform them of field construction requirements. Maintains surveillance over the layout of work from established base lines and benchmarks indicated on drawings and the operations necessary for quantity surveys. Directing inspection of construction operations for compliance with intent of design and specifications, interpreting plans and specifications, conferring with contractor representatives to resolve differences of opinion; and submission of required field inspection reports in a timely manner. Maintains approved contract schedule in updated condition. Arranges for and participates in acceptance inspection of completed facilities and ensures customer satisfaction. Observing and investigating construction at all stages to identify problems and take timely action to resolve problems encountered; identifying, reporting and recording need and data for change orders, and coordinating GFP and CFP to ensure timely delivery for incorporation in construction. Directing the contractor in the preparation of periodic pay estimate data, review for accuracy of placement shown and submitting for processing. Directing the submittal, by contractor, of required work schedules, certificates and test results on equipment and materials to be incorporated in, or placed in construction. Enforcing safety provisions of contract specifications and OCE Safety Requirements Handbook; promotes the safety program in accordance with division policy, and ensures submittal of contractor safety plan. Instructs subordinates in safe work practices and takes action to eliminate any observed or reported safety hazards. Investigates and promptly reports accidents resulting in personal injury or property damage. Ensures continuous inspection of construction by QA representatives. The individual exercises authority to establish detailed field inspection requirements, schedule and contract methods. The position interprets contract specifications for his area of field construction including enforcement of legal compliance with rules and regulations of host government and country-to-country agreements, determines whether construction meets contract requirements. The individual initiates action to correct or withhold payment for defective workmanship; and recommends changes in design, specifications and schedules to accommodate conditions at the construction site or to expedite construction. The engineer prepared Reports, records and other necessary actions for forwarding to high authority in a timely manner. Makes project assignments, establishes operating procedures, priorities and performance standards; provides advice and assistance as required; evaluates performance, resolves informal complaints, and determines training needs. Uses good employee management relations exercising sound principles in areas of discipline, leave administration, employee recognition, working conditions, etc. Performs periodic review of the position structure, and description accuracy and adequacy. Participates in review and improvement of organizational features and the structuring of positions to achieve efficiency and economy. Maintains effective coordination with TAC elements and with officials/ representatives of the contractor and government of Egypt.

The Army Vacancy Announcement Number for this position is NCR1743-01-CH. RESUMIX procedures through the Army National Capital Region CPOC, ATTN: SFCP-NR-S (RESUMIX), P. O. Box 430, Fort Belvoir, VA 22060-0430.

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DEPARTMENT OF DEFENSE HISTORIC BUILDINGS CONFERENCE

The second Department of Defense Historic Buildings Conference will be held June 12-14, 2001, in Atlanta. This year's conference will address concerns and issues regarding Cold War properties, properties less than 50 years old and how the DoD should maintain these structures.

The three-day conference in Atlanta will provide a forum and opportunity for DoD/military service installations, major commands, facilities and housing managers and cultural resources representatives to discuss Cold War policy, guidance, preservation, and regulatory requirements for installations to maintain Cold War properties.

The conference is designed around specific Cold War themes that will create dialogue on the critical issues:

- Day 1—Tuesday, June 12, 2001 – DoD Cold War Policy and Perspective: Day One will cover the policy perspective from DoD and each service. Session will include the State Historic Preservation Officers and Advisory Council on Historic Preservation perspective and how their perspective will impact DoD preservation policy.
- Day 2—Wednesday, June 13, 2001 – What are Cold War Properties? Day Two will discuss preservation solutions by reviewing case studies by each service and discussion of how to determinate eligibility of Cold War properties.
- Day 3—Thursday, June 14, 2001 – Solutions and Cold War Resources: Day Three will provide the attendee with resources that are available to the service, a discussion of properties less than 50 years old and determining state and local significance.

On the third day there will be a walking tour of the Fort McPherson historic properties.

Advance Registration will start March 12, 2001. There will be two ways to register for the conference: 1) by mail and 2) by Fax.

A block of rooms has been reserved at the Sheraton Gateway Hotel, 1900 Sullivan Road, College Park, GA 30337, telephone number (770) 997-1100. The conference room rate is \$87.00 plus taxes and all reservations should be made as soon as possible. The deadline for making hotel reservations is June 1, 2001. The hotel is located a half mile from Hartsfield Atlanta International Airport. The hotel provides a 24-hour complimentary airport shuttle.

For further information concerning the conference, please contact the Center of Expertise for Preservation of Historic Structures, 206-764-4482, or E-mail: Horace.H.Foxall@nws.usace.army.mil.

POC: HORACE H. FOXALL, CENWS-PM-MB, 206-764-4482

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WRDA 2000, SECTION 219

Section 219 of the Water Resources Development Act of 2000 reads in its entirety:

SEC. 219, ENGINEERING CONSULTING SERVICES. *In conducting a feasibility study for a water resources project, the Secretary, to the maximum extent practicable, should not employ a person for engineering and consulting services if the same person is also employed by the non-Federal interest for such services unless there is only 1 qualified and responsive bidder for such services.*

This provision must be considered when selecting consultants for water resources projects under either the Brooks Act for architect-engineer services or source selection procedures for other types of professional services. The synopsis or solicitation should warn that the Government reserves the right to not award to an offeror if the offeror has provided, or is providing, engineering or other consulting services for the local project sponsor, and a conflict of interest is anticipated that likely can not be avoided or mitigated. Organizational and consultant conflicts of interest are covered in considerable detail in [Federal Regulation Subpart 9.5](#).

Early and close coordination among engineering, contracting and counsel is essential if there is the potential for a conflict of interest in hiring a consultant who has also worked for a project sponsor.

POC: DON EVICK, CECW-EFE, 202-761-4227

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Training

EXECUTIVE FORUM ON CURRENT ISSUES

This forum is an opportunity to examine thoroughly a wide range of current issues that are influencing immediate and long-term executive responsibilities, such as domestic and foreign policies and the initiatives of the new Administration for progress toward reinventing Government. The focus of the seminar will be on domestic policy areas and international relations.

Key Results

- Implement relevant policies and programs more effectively
- Enhance the organization's performance
- Gain a corporate perspective on current government policies
- Relate policy initiatives to organizational issues
- Develop a global view of the Federal Government's roles and responsibilities
- Increase understanding of the executive Environment

We will thoroughly examine such topics as:

- eGov
- foreign policy
- national security
- stemming the flow of drugs
- countering terrorism
- the global economy
- education
- alternative dispute resolution

-
- social security
 - the influence of the press
 - changes in accountability for the SES
 - human capital

Participants will have the option of briefing the class on current issues in their organizations.

Who Should Attend -- Key program staff and managers at or above GS-13 or the equivalent. Graduates of the Executive Development Seminar are encouraged to attend.

Dates: April 16-27, 2001

Where: Eastern Management Development Center in Shepherdstown, WV

Tuition: \$3,300 includes tuition, materials, meals, lodging

Phone or email Bill Cristy at 304-870-8025 or becristy@opm.gov for content information. Contact the Center today for at 304-870-8008 or by the Internet at <http://www.leadership.opm.gov> to check on space availability.

POC: CHARLES PEARRE, CECW-EIS, 703-428-7343

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TEAM FACILITATION SKILLS WORKSHOP

The Team Facilitation Skills Workshop is an intensive, highly experiential seminar where participants learn to be effective team facilitators by engaging in actual team exercises. Participants receive specific real time feedback designed to improve their facilitation skills from professional facilitators who have years of experience in facilitating teams.

Location -- Western Management Development Center, Denver, Colorado

Dates -- March 26-30, 2001; June 18-22, 20001; or August 27-31 2001

A Sampling of Key Results from this Seminar

- Learn how to set up teams for success
- Learn and apply facilitation techniques and tools
- Gain the ability to apply collaborative problem solving techniques
- Understand how to deal effectively with team conflict and other difficult situations involving team members
- Explore how to build trust, rapport and open communication in a team environment

Who Should Attend -- Team leaders, facilitators, and supervisors at GS-11 or equivalent and above who are beginning the transition to a team environment.

Contact the Western Management Development Center today for space availability 304-870-8005 or learn more about this workshop at <http://www.leadership.opm.gov/fs32.html>.

ESSENTIAL SEMINARS FOR A NEW ADMINISTRATION

In a new administration, the skills to manage change are a necessity. -- These courses focus on the organizational systems, structures, and management skills necessary to create high performing organizations. In the fast changing global workplace of the 21st century, there is no longer one organizational structure that can be used universally to increase organization performance. Each organization must define the best systems and structures for their specific vision, mission, strategies and competencies. Then, managers must work to change the culture of the organization to support the new systems.

It is cultural change that is the most difficult. You can design great systems and structures, but the leader must create an environment where the people doing the work are driving the change and committed to high performance.

These courses will provide the public sector executive and manager with a roadmap to build a structure that is dynamic, flexible and responsive to change. The faculty includes academics, organizational consultants, and public sector executives who have been successful in creating high performing organizations.

Some of the key results you can expect from these courses:

- ~ Assess cultural readiness for change
- ~ Apply the Balanced Scorecard to your organization
- ~ Develop an action plan to increase performance in your organization
- ~ Link core competencies to outcomes defined in your strategic plan
- ~ Identify the gaps between existing and desired states
- ~ Learn effective ways to communicate your vision
- ~ Know what type of team structure to use where and when
- ~ Identify territorial games and develop skills to decrease them
- ~ Develop skills to create an environment where innovation drives change
- ~ Learn from public sector colleagues the skills to lead through chaos

Who Should Attend -- Senior managers and executives at the GS-15 level and above or equivalent who are responsible for leading organizational change and those in a position to be change agents.

Contact the Western Management Development Center today for space availability 304-870-8008. Learn more about this seminar at Course 1- <http://www.leadership.opm.gov/fs45.html> and Course 2- <http://www.leadership.opm.gov/fs46.html>.

Course 1 -- Strategies to Build High Performing Organizations: Performance Driven Organizations
Tuition --\$2,150

Classes are in Denver on April 30 - May 4, 2001 and July 23-27, 2001

Course 2 -- Strategies to Build High Performing Organizations: The Executive as Change Agent
Tuition --\$2,150

Classes are in Denver on May 7-10, 2001 and July 30 - August 2, 2001

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Open Discussion and Comments

No Items Submitted for this Issue.

(Editors' note: If you want to share your thoughts with our readers regarding a subject of general interest, send an email to the E&C News editor at charles.pearre@usace.army.mil. A synopsis of your comments will be published next time).

Editors' Notes

FUTURE THEMES

For individuals wishing to submit articles for future issues of the Engineering and Construction News, the themes for the next three issues are shown below:

April 2001	Knowledge Management
May 2001	Army Transformation
June 2001	World Class Technical Capabilities

The Districts of the Month will be as follows:

April 2001	Buffalo
May 2001	Far East
June 2001	TBA

POC: CHARLES PEARRE, CECW-EIS, 703-428-7343

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SUBSCRIBE TO ECNEWS

Engineering and Construction News uses a subscription list on the Corps List Server. The name of the list is LS-ECNEWS. The purpose of the list is to distribute the Engineering and Construction community newsletter, *Engineering and Construction News*.

You can subscribe or unsubscribe to LS-ECNEWS by sending an e-mail message to majordomo@ls.usace.army.mil with no subject line and only a single line of text in the message body. That single line of text should have the following format: **subscribe ls-ecnews** or **unsubscribe ls-ecnews**. The List Server system will automatically pick up your originating e-mail address from the message and add it to or delete it from the distribution list.

If you have any questions about the list server, see the List Server E-Mail Delivery System web page at <http://eml01.usace.army.mil/other/listserv.html>. Or you may contact Charles Pearre if you have additional questions on the subscription list.

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