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| CEHR-E<br><br>Engineer Pamphlet<br>690-1-11(RD) | Department of the Army<br>U.S. Army Corps of Engineers<br>Washington, DC 20314-1000 | EP 690-1-11(RD)<br><br>25 May 1993 |
| | Command-wide Recruitment and<br>Outreach Materials<br><br>Mission Area Supplement -<br>Reasearch and Development | |
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# Making a Difference...

# IN RESEARCH AND DEVELOPMENT

Success stories from the Corps' four major laboratories provide vivid proof of the Corps' research-and-development goal: to provide real answers to real problems through research, development, testing and investigational work in support of civil and military missions.

Corps funding for research and development amounts to more than $400 million annually. The Corps directly employs 1,100 people in laboratories and other research activities and indirectly

*In its research program, and in general, the Corps seeks to employ a wide variety of talent to get the broadest possible perspective on its missions.*

## 21ST-CENTURY BREAKTHROUGHS

In 1992, six scientists from the U.S. Army Corps of Engineers Cold Regions Laboratory with researchers from Russia successfully set up the first manned field station in the Weddell Sea, on an iceberg adrift off the jagged east coast of Antarctica. The region plays a crucial, but poorly understood role in regulating ocean currents and global climate.

Excessive corrosion of water tanks, pipelines and underground storage tanks results in system breakdowns, costly maintenance, and environmental hazards. To solve this problem, scientists at the Corps Construction Engineering Research Laboratory developed technology featuring a ceramic anode that makes corrosion protection available at one-half the life cycle cost of previous technologies.

## On the Forefront of Technology

At the Hazardous Waste Research Center at the Corps of Engineers Waterways Experiment Station, engineers, chemists and technicians are working together on the latest equipment to stop the contamination of groundwater and soil by all types of hazardous substances. The research is providing new remediation technologies in such areas as solidification/stabilization, chemical oxidation and reduction, bioremediation and others.

In Gen. Norman Schwarzkopf's famous briefing on February 27, 1992 describing the U.S.-led coalition forces' strategy during Operation Desert Storm, he emphasized the fact that technology had enabled him to "see" the entire battlefield while Sadam Hussein could not. Much of that superior knowledge was provided by the Corps' Topographic Engineering Center in Fort Belvoir, Virginia.

employs hundreds more through research contracts with universities. The Corps' research program emphasizes technology transfer, and works in close concert with other researchers both inside and outside the government.

Among the major research programs currently underway are the Dredging Research Program; the Wetlands Research Program; the Repair, Evaluation, Maintenance and Rehabilitation (REMR II) Program. The REMR II program seeks low-cost methods and materials to extend the life of America's aging infrastructure. Another major research program is the Construction Productivity Advancement Program (CPAR). The purpose of this program which is jointly funded by the Federal government and private sources, including construction firms, is to find ways to make the U.S. construction industry more productive at home and competitive abroad.

In its research programs, and in general, the Corps seeks to employ a wide variety of talent to get the broadest perspective on its missions. In addition to engineers, it especially seeks environment scientists, geologists, physicists, chemists, behavioral scientists, economists, computer scientists, urban planners, architects, geographers, hydrologists and natural resource professionals.