United States Army Engineer School

573-563-8080 / DSN 676-8080

COMMANDANT
BG Bryan G. Watson
563-6192
<bryan.watson@us.army.mil>

ASSISTANT COMMANDANT
COL Michael C. Presnell
563-6192
<mike.presnell@us.army.mil>

DEPUTY ASSISTANT COMMANDANT
Mr. James R. Rowan
563-4363
<james.rowan@us.army.mil>

REGIMENTAL COMMAND SERGEANT MAJOR
CSM Robert J. Wells
563-8060
<bobby.wells@us.army.mil>

REGIMENTAL CHIEF WARRANT OFFICER
CW5 Robert K. Lamphear
563-4088
<robert.lamphear@us.army.mil>

DEPUTY ASSISTANT COMMANDANT–USAR
COL Aaron T. Walter
563-8045
<aaron.walter.@us.army.mil>

DEPUTY ASSISTANT COMMANDANT–ARNG
LTC Michael S. Mismash
563-8046
<michael.mismash@us.army.mil>

CHIEF OF STAFF
LTC Charles P. Samaris
563-8080
<charles.samaris@us.army.mil>

COMMANDER, 1st ENGINEER BRIGADE
COL Tommy R. Mize
596-0224, DSN 581-0224
<tommy.mize@us.army.mil>

ACTING DIRECTOR OF TRAINING AND LEADER DEVELOPMENT
Mr. Michael A. Dascanio
563-4093
<michael.dascanio@us.army.mil>

DIRECTOR OF ENVIRONMENTAL INTEGRATION
Mr. Robert F. Danner
563-2845
<robert.f.danner@us.army.mil>

COUNTER EXPLOSIVE HAZARDS CENTER
COL David Theisen
563-8142
<david-theisen@us.army.mil>

HUMANITARIAN DEMINING TRAINING CENTER
Mr. Jonathan D. Green
563-6199
<jonathan.d.green@us.army.mil>

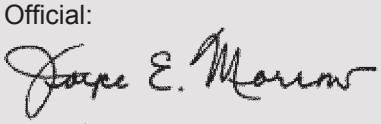
ENGINEER DOCTRINE, MSCoE DOT
LTC Stephen A. Danner
563-2717
<stephen.danner@us.army.mil>

MANEUVER SUPPORT ORGANIZATION
Mr. Kenneth C. Garrett
563-7889
<kenneth.garrett@us.army.mil>

MANEUVER SUPPORT MATERIEL
LTC Carl J. Hollister
563-8274
<carl.jerome.hollister@us.army.mil>

By Order of the Secretary of the Army:
GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:



JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
1007001

Engineer (ISSN 0046-1989) is published three times a year by the United States Army Engineer School and the MSCoE Directorate of Training, 464 MANSCEN Loop, Suite 2661, Fort Leonard Wood, Missouri 65473-8926. Periodicals postage is paid at Fort Leonard Wood, Missouri, and additional mailing offices.

POSTMASTER: Send address changes to MSCoE Directorate of Training, ATTN: ATZT-TDS-BS (Engineer), 464 MANSCEN Loop, Suite 2661, Fort Leonard Wood, Missouri 65473-8926.

CORRESPONDENCE, letters to the editor, manuscripts, photographs, official unit requests to receive copies, and unit address changes should be sent to *Engineer* at the preceding address. Telephone: (573) 563-4104, DSN 676-4104; e-mail address: *<leon.engineer@conus.army.mil>*; Internet home page: *<http://www.wood.army.mil/engrmag/default.htm>*.

DISCLAIMER: *Engineer* presents professional information designed to keep U.S. military and civilian engineers informed of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development. Views expressed are those of the authors and not those of the Department of Defense or its elements. The contents do not necessarily reflect official U.S. Army positions and do not change or supersede information in other U.S. Army publications. Use of news items constitutes neither affirmation of their accuracy nor product endorsement. *Engineer* reserves the right to edit material submitted for publication.

CONTENT is not copyrighted. Material may be reprinted if credit is given to *Engineer* and the author.

OFFICIAL DISTRIBUTION is targeted to all engineer and engineer-related units.

PERSONAL SUBSCRIPTIONS are available for $24.00 ($33.60 foreign) per year by contacting the U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000.

ADDRESS CHANGES for personal subscriptions should be sent to the Superintendent of Documents, P.O. Box 979050, St. Louis, Missouri 63197-9000.

ENGINEER

The Professional Bulletin of Army Engineers

Volume 40 PB 5-10-1 | Headquarters, Department of the Army | *January-April 2010*

UNITED STATES ARMY ENGINEER SCHOOL

COMMANDANT
Brigadier General Bryan G. Watson

MSCoE
DIRECTORATE OF TRAINING
PUBLICATIONS BRANCH

MANAGING EDITOR
Shirley Bridges

EDITOR
Rick Brunk

CONTRIBUTING EDITOR
Susan Stevens

GRAPHIC DESIGNER
Jennifer Morgan

Front cover: ENFORCE 2010 and Beyond

Back cover: Clockwise: U.S. Army divers in Port-au-Prince, Haiti; Hyex fills Hesco, Victory Base Complex; construction at Al Anbar Province, Iraq; and Soldier and military working dog, Dura'iya, Iraq.

DEPARTMENTS

2 **Clear the Way**
By Brigadier General Bryan G. Watson

3 **Lead the Way**
By Command Sergeant Major Robert J. Wells

4 **Show the Way**
By Chief Warrant Officer Five Robert K. Lamphear

5 **Dedication**

5 **Proposed Fallen Engineers Memorial**

39 **The Engineer Writer's Guide**

53 **Subscription Order Form**

FEATURES

6 **ENFORCE Campaign Plan Work Groups**
By Mr. Michael A. Dascanio

8 **Army Engineer Association: The Engineer Regiment's Lifetime Network**
By Colonel Jack O'Neill (Retired)

10 **Adapting the Army: Institutionalizing Counter-IED Training Efforts**
By Mr. Dorian D'Aria and Mrs. Tahnee L. Moore

14 **Strengthening the Regiment: Training and Readiness Authority–Plus**
By Lieutenant Colonel Diana M. Holland

18 **Engineers Build Capacity in Stability Operations**
By Colonel Jeffrey R. Eckstein

21 **Army Training Support Enterprise: A New Paradigm for Training Support**
By Ms. Deborah O. Billups

23 **Army Reserve Update**
By Colonel Jose E. Cepeda

25 **Multitasking Under Fire**
By Captain Daniel J. Lucitt

28 **The Brigade Engineer**
By Major Gerald S. Law

32 **National Guard Solar Power Projects**
By Dr. JoAnne Castagna

34 **Joint Engineer Operations Course**
By Lieutenant Colonel Shawn P. Howley (Retired) and Mr. Michael A. Dascanio

36 **The GeoPDF Project: Creating Maps for the Non-Mapper**
By Mr. Raymond G. Caputo

38 **Welcome Addition: 210A Warrant Officers in Modular Engineer Companies**
By Captain John A. Dills III

40 **USACE Projects Impact Iraq's Environment**
By Mr. Ronald A. Reeves and Mr. Scott D. Harris

42 **Engineer Doctrine Update**

44 **Route Reconnaissance and Clearance: A Marine Aircraft Wing Future Capability**
By Major Nick I. Brown and Major Taylor P. White

48 **Battle of Dara**
By Captain Andrew J. Dornstadter

51 **Transformation in Korea**
By Major Rafael Pazos and Captain Miguel Uc