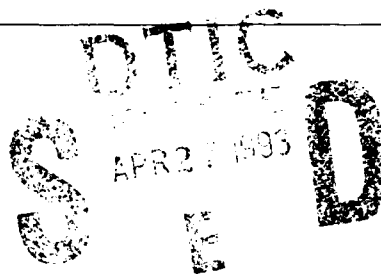


Soil Mechanics Information

SMIAC

Analysis Center



Volume 93-1

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March 1993

Soil Mechanics Information Analysis Center

The Soil Mechanics Information Analysis Center (SMIAC) is one of a number of Information Analysis Centers established by the Department of Defense to collect, review, analyze, evaluate, summarize, and store available information on subjects within highly specialized technical areas of concern. The SMIAC covers the following subject areas:

Soil Mechanics
Rock Mechanics
Engineering Geology
Engineering Seismology
Geophysics
Hydrogeology
Earthquake Engineering

The SMIAC can acquire state-of-the-art reference materials in any of the above subjects and provide detailed technical analysis by some of the world's most prominent experts. The center is located within the Geotechnical Laboratory at the U.S. Army Engineer Waterways Experiment Station (WES). The Geotechnical Laboratory is the largest laboratory in the country devoted to this kind of research. The staff has acquired 85 advanced degrees including 31 PhDs. The WES library has an extensive engineering and scientific collection of

more than half-a-million reference materials and network access to a world of additional information. The SMIAC offers direct contact with the experts and on-line access to the WES library.

The day-to-day operation of the SMIAC typically involves responses to requests for information. The center can provide limited services free of charge, such as a request for a technical report. Special studies called "Technical Area Tasks" (TAT) can be performed on a cost-reimbursable basis. TATs involve work on a narrowly focused subtopic within the scope of SMIAC. The most current and useful information relative to the subtopic can be assembled through acquisition and analysis of preexisting scientific and technical information and the performance of primary research.

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A Department of Defense Information Analysis Center

The SMIAC bulletin is published and distributed periodically. Please contact the Director of SMIAC for more information:

Director, Soil Mechanics Information Analysis Center
U.S. Army Engineer Waterways Experiment Station
ATTN: CEWES-GV-Z
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

Phone: 601-634-3376

FAX: 601-634-3139

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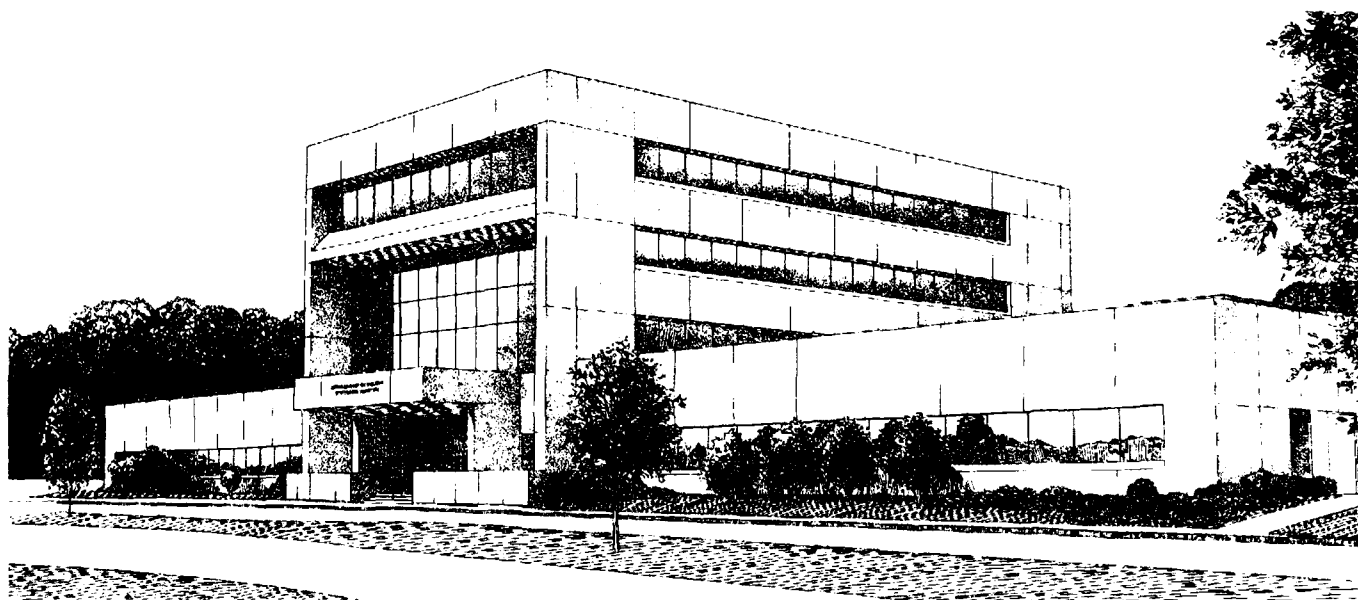
The Waterways Experiment Station

The Waterways Experiment Station (WES) is the principal research, testing, and development facility of the U.S. Army Corps of Engineers. The 672-acre installation consists of a complex of 6 laboratories:

Hydraulics Laboratory
Geotechnical Laboratory
Structures Laboratory
Environmental Laboratory
Coastal Engineering Research Center
Information Technology Laboratory

The Tri-Service Reliance Strategy designates WES as the lead laboratory for airfields and pavements, sustainment engineering, and survivability and protective structures.

The SMIAC is one of five recognized Department of Defense Information Analysis Centers located at WES.



The Geotechnical Laboratory

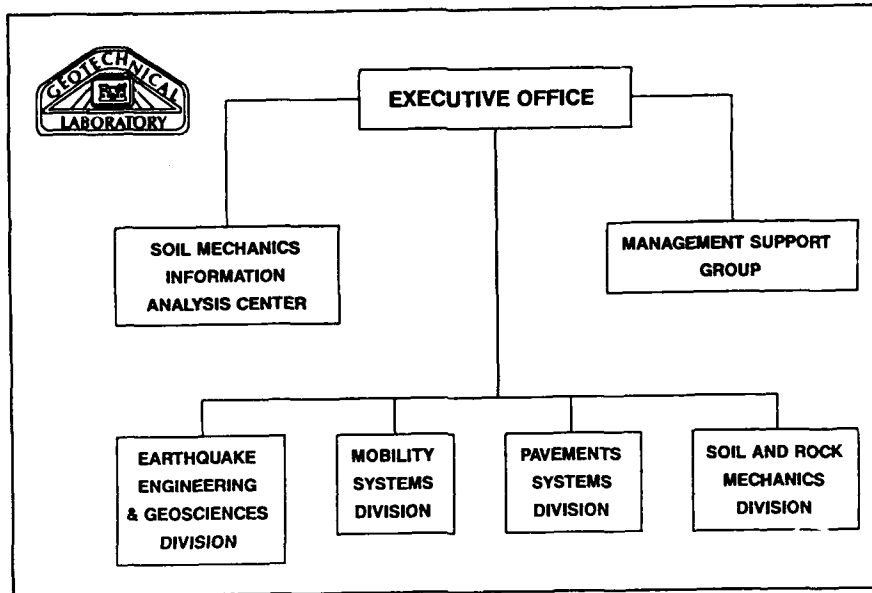
The Geotechnical Laboratory conducts research, development, and testing in earth sciences including soil mechanics, structural foundation design, embankment design, seepage analysis, slope stability, pavement technology, engineering geology, rock mechanics, engineering geophysics, expedient surfacing, dust control, earthquake engineering,

groundwater contamination, vehicle mobility, and trafficability. The SMIAC is part of the Geotechnical Laboratory.

Main organizational elements of the Geotechnical Laboratory are shown in the following chart.

Partial Listing of Recent Geotechnical Laboratory Publications

<i>Report-Number</i>	<i>Date</i>	<i>Title</i>	<i>NTIS AD Number</i>
IR-GL-92-4.1	09/92	USACE Geotechnical Earthquake Engineering Software. By Sykora, David W., Wahl, Ronald E.	A257068
MP-GL-92-3	01/92	Geotechnical Centrifuge used at University of Cambridge Geotechnical Centre August-September 1991, By Gilbert, P. A.	
MP-GL-92-5	02/92	Geophysical Investigation at Solid Waste Management Unit No. 3, Fort Buchanan, Puerto Rico, By Llopis, José L. and Sharp, Michael K.	A247104
MP-GL-92-8	06/92	Geophysical Investigation at Philadelphia Naval Shipyard, By Sharp, Michael K.	A250594
MP-GL-92-17	07/92	A Case Study: Damage to the Metropolitan Oakland International Airport Caused by the Loma Prieta Earthquake, By Vallerga, Barney A. and Grogan, William P.	
MP-GL-92-23	08/92	Kwajalein Drydock Pile Foundation Analysis, By Johnson, Lawrence D.	A255081
MP-GL-92-31	09/92	McCon-A General Contouring Program For Personal Computers, By Palmerton, John B.	
MP-GL-92-34	09/92	Geophysical Investigation at Dugway Proving Ground, Utah, By Llopis, José L. and Zawila, Jeffrey S.	A257098
MP-GL-92-35	09/92	Effect Of Sampling Disturbance on Laboratory-Measured Soil Properties, By Gilbert, P. A.	
MP-S-73-1.28	06/92	State-Of-The-Art For Assessing Earthquake Hazards In The United States, By Leeds, David J.	A256276
TR-GL-86-7	09/92	Seismic Stability Evaluation of Alben Barkley Lock and Dam Project, By Wahl, Ronald E., Olsen, Richard S., Bluhm, Paul F., Yule, Donald E., and Hynes, Mary E.	
TR-GL-87-14.8	08/92	Seismic Stability Evaluation of Folsom Dam and Reservoir Project: Report 8, Mormon Island Auxiliary Dam - Phase II, By Wahl, R. E., Crawford, S. G., Hynes, M. E., Comes, G. D., Yule, D.	
TR-GL-90-2.3	03/92	Land Loss Rates; Report 3, Louisiana Coastal Plain, By Dunbar, J. B., Britsch, L. D. and Kemp, E. B., III	A256591
TR-GL-92-2	03/92	Seismic Detection and Location of Tunnel Boring Machines at the Satanislaus River Hydroelectric Development Project Calaveras County, California, By Lewis, R. D.	B1 62506
TR-GL-92-5	05/92	Strength Property Estimation For Dry, Cohesionless Soils Using The Military Cone Penetrometer, By Perkins, William E.	A255558
TR-GL-92-6	06/92	Laboratory Measurement of Pullout Resistance of Geotextiles Against Cohesive Soils, By Gilbert, Paul A. Oldham, Jessie C., Coffing, L. Rodgers, Jr.	A253752
TR-GL-92-12	08/92	Assessment and Selection of an Automated Electrical Resistivity Interpretation Procedure. By Simms, Janet E. and Butler, Dwain K.	A255749
TR-GL-92-16	09/92	Two-Dimensional Planar Geosystems Subjected To Three-Dimensional Dynamic Loads, By Sykora, David W.	
TR-3-712SUPP6	12/92	Selected Geologic Literature, Lower Mississippi Valley Division Area Index and Annotated Bibliography, Supplement 6 By Saucier, R. T. and Hunt, R. W.	A148945
TR-S-70-9.SUPP	12/92	Study of Clay Shale Slopes Along the Panama Canal Report Supplement, A Reanalysis of the East Culebra Slide, Panama Canal, By Banks, D. C.	A061404



Partial Listing of Geotechnical Experts at WES

<i>Research</i>	<i>Contact</i>	<i>Telephone</i>
Blasting Vibrations	Dr. P. F. Hadala	601-634-3475
Drilling and Sampling	Mr. M. A. Vispi	601-634-2254
Earthquake Engineering	Dr. M. E. Hynes	601-634-2280
Engineering Geology	Dr. L. M. Smith	601-634-2497
Engineering Seismology	Dr. E. L. Krinitzsky	601-634-3329
Geomorphology	Dr. L. M. Smith	601-634-2497
Geophysics	Dr. D. K. Butler	601-634-2127
Geotechnical Computer-Aided Engineering	Mr. E. V. Edris	601-634-3378
Geotechnical River Engineering	Dr. V. H. Torrey III	601-634-2619
Geotextiles	Dr. J. Fowler	601-634-2703
Numerical Modeling	Dr. J. F. Peters	601-634-2590
Rock	Dr. D. C. Banks	601-634-2630
Rock In-Situ Testing	Mr. J. B. Warriner	601-634-3610
Soil Dynamics	Dr. A. G. Franklin	601-634-2658
Soil Erosion	Dr. E. B. Perry	601-634-2670
Soil Foundations	Dr. L. D. Johnson	601-634-3840
Soil In-Situ Testing	Dr. R. W. Peterson	601-634-3737
Soil Instrumentation	Mr. R. E. Leach	601-634-2727
Soil Laboratory Testing	Mr. G. P. Hale	601-634-2219
Soil Mechanics - General	Mr. W. M. Myers	601-634-2640
Soil at Waste Sites	Mr. R. D. Bennett	601-634-3974
Subbottom Acoustic Survey	Mr. R. F. Ballard	601-634-2201
Underground Utilities	Mr. R. D. Bennett	601-634-3974
Water Wells	Mr. R. E. Leach	601-634-2727

Director of the Soil Mechanics Information Analysis Center is David R. Haulman who has been an engineer at the Waterways Experiment Station since 1978. He holds degrees from the University of Southwestern Louisiana, the University of Southern California, and Mississippi State University. He is a registered professional engineer.



The SMIAC Bulletin is published in accordance with AR 25-30 as one of the information exchange functions of the Corps of Engineers. The purpose of the bulletin is to rapidly and widely disseminate information to other Corps offices, US Government agencies, and the engineering community in general. The bulletin does not promulgate Corps policy. The contents of this bulletin are not to be used for advertising, or promotional purposes, nor are they to be published without proper credits. Any copyrighted material released to and used in *The SMIAC Bulletin* retains its copyright protection, and cannot be reproduced without permission of copyright holder. *The SMIAC Bulletin* will be issued periodically. Communications are welcomed and should be made by writing US Army Engineer Waterways Experiment Station, ATTN: David Haulman (CEWES-GV), 3909 Halls Ferry Road, Vicksburg, MS 39180-6199, or calling 601-634-3376.

ROBERT W. WHALIN, Ph.D. PE
Director

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