



REPORTS OF MEETINGS

Report of the 54th Meeting—Coastal Engineering Research Board

The U.S. Army Corps of Engineers Coastal Engineering Research Board (CERB) held its 54th public meeting on 4-6 June 1991 in New Orleans, Louisiana. The CERB holds public meetings semi-annually to consider coastal issues. The theme of the 54th meeting was coastal flood protection. The meeting was hosted by Lower Mississippi Valley Division and New Orleans District of the U.S. Army Corps of Engineers.

MG Arthur E. Williams, Director of Civil Works, is the President of the Board (see photograph). Civilian members are Professor Robert A. (Tony) Dalrymple from the University of Delaware, Professor Fredric Raichlen from the California Institute of Technology, and Professor Robert O. Reid from Texas A&M University. Other Corps of Engineers military members are MG John F. Sobke, Commander, South Atlantic Division; BG Stanley G. Genega, Commander, Southwestern Division; and BG Roger F. Yankoupe, Commander, South Pacific Division. COL Larry B. Fulton, Commander and Director of the U.S. Army Engineer Waterways Experiment Station, serves as executive secretary.

The meeting included four panels, the first of which was on the Dredging Research Program (DRP). Mr. E. Clark McNair, Jr., DRP Program Manager, gave an update on the program. Dr. Nicholas C. Kraus, CERC, made a presentation on DRP monitoring of dredged material plumes, including a DRP video entitled "Plume Tracking off Mobile, Alabama." Mr. Mark P. Skarbek, Jacksonville District, discussed the plume monitoring experience at the Miami Harbor project. Dr. John R. Proni, Ocean Acoustics Division, Atlantic Oceanographic and Meteorological Laboratory, National Oceanic and Atmospheric Administration, also made a presentation on discharged dredged material plume monitoring.

The second panel was Coastal Flooding/Erosion—Gulf Coast Perspective and Initiatives. Mr. Thomas R. Campbell, Lower Mississippi Valley Division, presented findings of the Coastal and

Shoreline Erosion Subcommittee, Gulf of Mexico Program, on the magnitude of the problem. Mr. S. Jeffress Williams, U.S. Geological Survey National Headquarters, presented the status of the U.S. Geological Survey coastal research activities related to coastal erosion and wetlands loss in Louisiana. Mr. T. John Rowland, Minerals Management Service, discussed activities of the Gulf of Mexico Task Force to evaluate the potential development of marine mineral resources in the Outer Continental Shelf Exclusive Economic Zone. This included the feasibility of mining sand for shoreline renourishment. Dr. Shea Penland, Louisiana State Geological Survey, discussed the status of Louisiana Geological Survey research activities related to coastal land loss in Louisiana. Mr. James B. Edmonson, Executive Director, South Central Planning and Development Commission, discussed erosion, flooding, and planning in the coastal parishes of Louisiana. Ms. Sally Davenport, Director, Coastal Division, Texas General Land Office, discussed coastal erosion in Texas. Dr. Linda L. Glenboski, New Orleans District, made a presentation on Corps O&M activities and programs to reduce coastal erosion, and Mr. Robert H. Schroeder, New Orleans District, made a presentation on Corps of Engineers studies underway that address coastal and shoreline erosion.

The third panel was on waves and storm surge due to hurricanes. Dr. C. Linwood Vincent, CERC, presented an introduction on the Corps of Engineers uses of hurricane information, and Mr. A. J. Combe, III, New Orleans District, discussed the District's research needs on hurricane surge and waves. Dr. Edward F. Thompson, Mr. H. Lee Butler, Dr. Martin C. Miller, and Dr. Kraus, CERC, presented an overview of Corps of Engineers procedures and state-of-the-art modeling of wind prediction, storm surge water levels, wave predictions, and beach modifications. Dr. Vincent summarized the capabilities and research requirements.



CERB members present at the 54th meeting. From left to right in the photo they are: COL Larry B. Fulton, Executive Secretary of the Board; and Board Members: BG Stanley, G. Genega, Dr. Robert A. Dalrymple, MG Arthur E. Williams (CERB President), Dr. Fredric Raichlen, BG Roger F. Yankoupe, and Prof. Robert O. Reid.

The last panel was on coastal flooding emergencies. Mr. Gary M. Campbell, Headquarters, U.S. Army Corps of Engineers, summarized the Corps' authority and role in disaster response. Mr. Robert P. Fletcher, Federal Emergency Management Agency, discussed FEMA's authority and role. Mr. Thomas W. Richardson, CERC, made a presentation on R&D needs identified from Hurricane Hugo and other disasters. Mr. Frank Stubbs, Lower Mississippi Valley Division, discussed ongoing R&D efforts, and Mr. Campbell addressed potential R&D needs.

In addition to the four panels, Dr. Susan I. Rees, Mobile District, made a presentation on the National Berm Demonstration Program; Mr. Russell F. Theriot of the WES Environmental Laboratory and Ms. Joan Pope, CERC, presented an overview of the Wetlands Research Program and the Coastal Initiative under that program; and Mr. McNair gave an update on the Corps' Oil Spill Initiative. The members of the Board made a response to the Chief of Engineers' charges to the Board.

COL Fulton gave a status report on previous Board action items and a summary of other items of interest. A public comment period was provided, and several members of the public used this opportunity to address the Board.

A summary of proceedings of the meeting will be available at a later date. Point of contact for information on the meetings is Ms. Sharon Hanks of CERC, administrative assistant to the Board, at (601) 634-2004, FAX (601) 634-2055. Copies of proceedings are available from CERC.

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SEPM/IGCP Project 274 Conference on Quaternary Coastal Evolution Wakulla Springs, Florida, 8–11 May 1991

A research conference on Quaternary Coastal Evolution, under the joint sponsorship of SEPM and IGCP Project 274, was held at Florida State University's Wakulla Springs Lodge and Conference Center on 8–11 May 1991. Conveners were Richard A. Davis (University of South Florida), Joseph F. Donoghue (Florida State University), Charles H. Fletcher (University of Hawaii), and John R. Suter (Exxon Production Research). IGCP Project 274 is under the direction of Orson van de Plassche (Free University of Amsterdam).

Sixty papers or posters were presented by coastal researchers from Brazil, Canada, France, Great Britain, Japan, Korea, New Zealand, The Netherlands, the People's Republic of China, Portugal, Tanzania, and the United States. Five technical

sessions were held, with keynote addresses on the following themes: Global Perspectives on Quaternary Coastal Evolution, North American Perspectives on Coastal Evolution, Human Impacts and Coastal Change, Late Quaternary Sequence Stratigraphy and Facies Models, and Sea Level Change and Coastal Evolution. Keynote speakers included Orson van de Plassche, Rhodes W. Fairbridge, Orrin H. Pilkey, John C. Kraft, and Donn S. Gorsline.

The major topics of the papers and posters were: Coastal sedimentology and coastal evolution (19 papers); coastal stratigraphy, including sequence stratigraphy (14 papers); sea level change (14 papers); human influence and storm effects (5 papers); dating techniques for coastal sedimentary



Group photo of SEPM/IGCP-274 participants of the May 10th field trip to St. Vincent Island, Florida.

sequences (4 papers); and tectonic effects (4 papers).

Three coastal field trips were organized as part of the conference. Skip Davis led a two-day pre-meeting field trip to the barrier and marsh coast of west Florida. Joe Donoghue, Tom Scott, Jim Breza, and Chuck Savrda led a one-day trip during the conference to observe Neogene/Quaternary coastal and nearshore deposits of northeast Florida. Another half-day trip was led by Joe Donoghue, Felix Rizk and Nancy White to examine the Holocene beach ridge plain on St. Vincent Island (see photo).

The conference enabled active researchers in the field of coastal geology to interact through technical sessions, field trips, and numerous informal gatherings at the conference center. The

meeting provided a much-needed focus for ideas, information and opinions. The sessions and other gatherings made it clear that coastal research is undergoing rapid change and renewed emphasis, and is becoming more quantitative and more interdisciplinary.

Information regarding the abstract volume may be obtained by writing to the address below. A selection of papers from the conference will be published in a forthcoming special issue of *Sedimentary Geology*.

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Report of the Corps of Engineers Regional Coastal Workshop

A U.S. Army Corps of Engineers Regional Coastal Workshop was held in Ann Arbor, Michigan, on July 23–24, 1991. Attendees included engineers and scientists from Corps of Engineers Divisions, Districts, and the Waterways Experiment Station (WES), and representatives from NOAA, USGS, U.S. Coast Guard, Environment Canada, and the States of Michigan, Ohio, Indiana and Illinois. The workshop focused on coastal problems of the Great Lakes and other inland lakes.

The opening presentation on the first day was on the Coastal Engineering Data Retrieval System (CEDRS) by Mr. Doyle Jones of the Coastal Engineering Research Center (CERC), WES. Demonstrations of the CEDRS system were provided during the remainder of the workshop. Dr. Jon Hubertz, CERC, gave a presentation on Great Lakes wind and wave hindcast data. This data will eventually be incorporated in CEDRS, but is presently being provided separately to users upon request.

The remainder of the first morning was devoted primarily to rubble structures. Mr. Tom Bender, Buffalo District, gave a summary of stone quality and stone breakage problems at Corps of Engineers projects on the Great Lakes. Mr. Don Ward, CERC, presented a proposed effort under the Re-

pair, Evaluation, Maintenance, and Rehabilitation (REMR) research program to look at the effects of stone breakage on the stability of rubble-mound structures. Dr. Richard Lutton of the Geotechnical Laboratory, WES, discussed the geotechnical and quarrying aspects of stone quality; and Mr. D. D. Davidson, CERC, provided a summary of the recent American Society of Civil Engineers Seminar on Stone Quality. Mr. Ross Kittleman, Detroit District, and Ms. Joan Pope, CERC, closed the morning session with a discussion of the Coastal Structure Index System.

Mr. Wayne Dorrough and Mr. Mike Knofczynski, Omaha District, opened the afternoon session with a discussion of shoreline erosion on inland lakes. They noted that on 5,000 miles of shoreline on lakes along the main stem of the Missouri River, illustrated various types of eroding shoreline, and discussed the problem of defining an equilibrium shoreline. Mr. Jack Davis, CERC, presented information on a REMR R&D effort on inland lake shorelines. Mr. Charlie Johnson, North Central Division, made a presentation on the process of clay-bluff profile evolution, including a discussion of the Longinov-type profile. Ms. Pope summarized the International Joint Commission studies on shoreline erosion and lake levels.

The balance of the afternoon was devoted to

discussions of numerical models. Mr. Mark Gravens, CERC, made a presentation on the assessment of long-term performance of beach fills using the shoreline modeling system. Mr. Lyle Thompson, Detroit District, discussed the need of modeling for cohesive shorelines, and Mr. Bruce Ebersole, CERC, presented information on beach profile response models and discussed the efforts that would be required in order to apply the models to cohesive shorelines.

The morning of the second day opened with a discussion of nearshore disposal of dredged material for beach nourishment. Mr. Matthew Walsh, Buffalo District, discussed Great Lakes experience; Ms. Cheryl Burke, CERC, gave a brief look at feeder and stable berms as a tool for providing wave attenuation and introducing sediment into the littoral zone; and Dr. Norm Scheffner spoke on preliminary design and how numerical models are used for evaluation.

Dr. Don Stauble, CERC, Mr. Thompson, and Mr. Johnson discussed the effects of gradation on beach nourishment performance. Mr. Bender and Mr. James Clausner, CERC, discussed sand bypassing at small navigation inlets; and Mr. Mike Mohr, Buffalo District, and Ms. Monica Chasten,

CERC, discussed the performance of detached breakwater systems. Mr. Mohr closed the morning session with a discussion of the effects of sand waves on shorelines, using Presque Isle, Pennsylvania as an example.

Mr. Johnson opened the second afternoon with a discussion on the effectiveness of shore protection structures on clay shorelines, providing examples of many failed structures. Mr. Ed Hands, CERC, made a presentation on sediment and profile data collection and monitoring, and the undersigned closed the workshop with a summary of requirements for defining and analyzing shoreline problems.

A summary of proceedings of the workshop will be published as an Engineer Circular, and will be available at a later date.

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BOOKS RECEIVED

Coastal Sediments '91 (Proceedings of a Specialty Conference on Quantitative Approaches to Coastal Sediment Processes), by N.C. Kraus, K.J. Gingerich, and D.L. Kriebel. 1991. New York: American Society of Civil Engineers, 2 Vols. 2360p. ISBN 0-87262-808-6. (pbk)

Proceedings of the Symposium on Coastal Sand Dunes (Guelph, Ontario, 12-14 September 1990), R. Davidson-Arnott (ed.), 1990. Ottawa, Ontario, Canada: Coastal Zone Engineering, Institute for Mechanical Engineering, National Research Council, 471p. (pbk)

The Rising Tide: Global Warming and World Sea Levels, by L.T. Edgerton, 1991. Washington, DC: Island Press, 136p. ISBN 1-55963-067-1. (pbk)

Wetlands, By W.J. Mitch and J.G. Gosselink, 1986. New York: Van Nostrand Reinhold, 537p. ISBN 0-442-26398-8.

Changes in Shoreline Oiling Conditions 1-1½ Years After the 1989 Prince William Sound Spill, by E.H. Owens, 1991. Seattle, WA: Woodward-Clyde, 52p. + appendices.

Books Received From
U.S. Army Corps of Engineers
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Coastal Response to Port Sheldon Jetties at Pigeon Lake, Michigan, by M. Hansen and S.G. Underwood, 1991. Miscellaneous Paper CERC-91-4.