



THE NEWSLETTER OF THE U.S. SECTION, PIANC

Permanent International Association of Navigation Congresses

Spring 1998

Inside this issue:

New U.S. Section Treasurer	3
Water Injection Dredges	6
Marine Transportation Review	7
29th International Navigation Congress	8
Germany Seeks Cargo Shift to Waterways	9

In each issue:

Activities	13
------------------	----

NOTES FROM THE SECRETARY

■ The **ASCE/PIANC PORTS '98 CONFERENCE** attracted over 1000 attendees to Long Beach, California, March 8-11, 1998. The success of the meeting is the result of cooperation between the ASCE, the association's Ports and Harbors Committee, and the U.S. Section of PIANC. Co-hosted by the Port of Los Angeles and the Port of Long Beach, the 1998 conference is the eighth in the ports series, which was initiated in 1977 in Long Beach. Co-sponsorship with the U.S. Section of PIANC dates back to the 1992 conference, which was held in Seattle, Washington. The association has proven to be very beneficial for both organizations and our constituent

members. A broad range of national and international issues related to port engineering, waterfront facilities planning and navigation improvements were included in 40 technical sessions and the 148 technical papers presented during the three-day event. **Dr. John H. Zirschky**, Chairman of the U.S. Section, opened the conference with **Mr. James E. Davis**, Executive Director of ASCE. **Major General Russell L. Fuhrman**, President of the U.S. Section, presided at the conference luncheon on March 9th. As Master of Ceremonies, **MG Fuhrman** presented the U.S. Section Gustave Willems Award for 1998 to **Mr. Lloyd M. Coakley**, a Civil Engineer at the St. Louis District, for a paper entitled, *R.A.P.I.D. Engineering, Design and Management on the Mississippi River*. (See photograph on page 5.) **Mr. Charles Van Begin**, Secretary-General of the International Navigation Association (PIANC), attended PORTS '98 and spoke at the luncheon. The **Port of Los Angeles** and the **Port of Long Beach** jointly presented the U.S. Army Corps of Engineers a special award for 100 years of service to the ports. A photograph of officials

involved in the presentation appears on page 5 of this newsletter.

- The final announcement and registration forms for the **29th International Navigation Congress** are available from the Office of the U.S. Section of PIANC. Please make plans to attend the Congress in The Hague, The Netherlands, 6-11 September 1998. Take advantage of the lower registration fee by sending in your forms prior to 25 August. After that date, the fee increases.
- An Individual Technical Paper submitted by **Dr. Dennis P. Robinson and Dr. Harry J. Kelejian** has been accepted by the international jury for presentation at the 29th Navigation Congress in The Hague (see article on page 7). One of eight Individual Papers designated for presentation in this new category, this is the only paper accepted that was submitted by an author from the United States. A list of the titles and authors of the National Papers was printed in the Summer 1997 issue of the Newsletter.
- **Handling and Treatment of Contaminated Dredged Material (CDM) from Ports and Inland Waterways**, the report of Permanent Technical Committee II Working Group 17, has been published as a CD-ROM. This milestone publication is the first PIANC technical report issued in electronic format. The report was completed under the leadership of **Mr. Norman R. Francingues, Jr.**, U. S. Army Engineer Waterways Experiment Station, who also served as chairman of the international working group. The CD-ROM was produced for PIANC International by the U.S. Section and the firm of **Duplication Technology in**

Boulder, Colorado. See page 15 for information about how to order the CD-ROM.

- The **1999 conference of the U.S. Section** will be held in Memphis, Tennessee, May 12-14, 1999. The Port of Memphis Director, **Mr. Don C. McCrory**, will be the host of the meeting. The Technical Program Committee is currently being organized by the Chairman, **Mr. Ron Zimmer** of Sverdrup Civil, Inc. Additional information will be provided in the newsletter as it becomes available. **Mark your calendars now and plan to be in Memphis.**
- **Mr. Charles F. Connors**, a former U.S. National Commissioner (1989 - 1997) and the Co-Principal U.S. Representative to the Permanent Technical Committee II (PTC II), has resigned from the latter position to devote more time to his consulting practice. As Commissioner and the PTC II Co-Representative, Chuck provided valuable service to PIANC.
- Recently, the following U.S. Representatives have been appointed to international working groups:

Claude N. Strauser - *Technical and Economic Problems of Channel Icing*

U. S. Army Corps of Engineers District,
Saint Louis, ~~Kansas~~ *Missouri*

James D. Prehn - *Monitoring of Breakwaters*

W.F. Baird & Associates, Ltd., Madison,
Wisconsin

Jeffrey F. Gilman - *Guidelines for the Design of Berm Breakwaters*

Peratovich, Nottingham & Drage, Inc.,
Seattle, Washington

R. Scott Jackson - *Recreational Navigation and Nature*

U. S. Army Waterways Experiment Station, Vicksburg, Mississippi

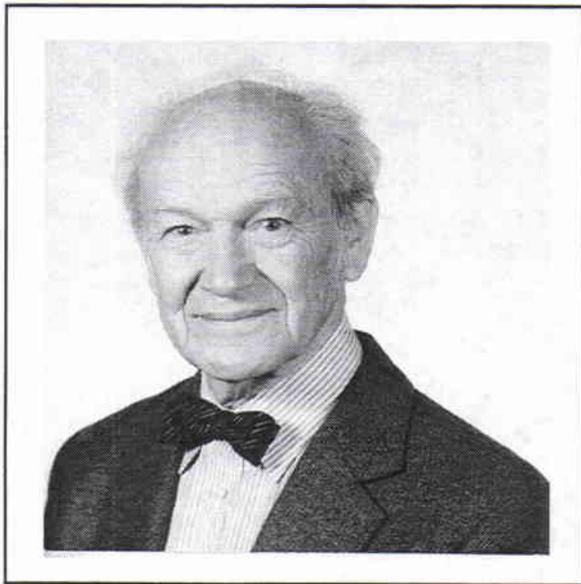
Paul Donheffner - *Recreational Navigation and Nature*

Oregon State Marine Board, Salem, Oregon

Michael R. Palermo, Ph.D. - *Environmental Guidelines for Marine, Nearshore, and Inland Confined Disposal Facilities (CDF) for Contaminated Dredged Material*

U. S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi

McLAREN RETIRES; CARMAN BECOMES NEW TREASURER



James R. Carman

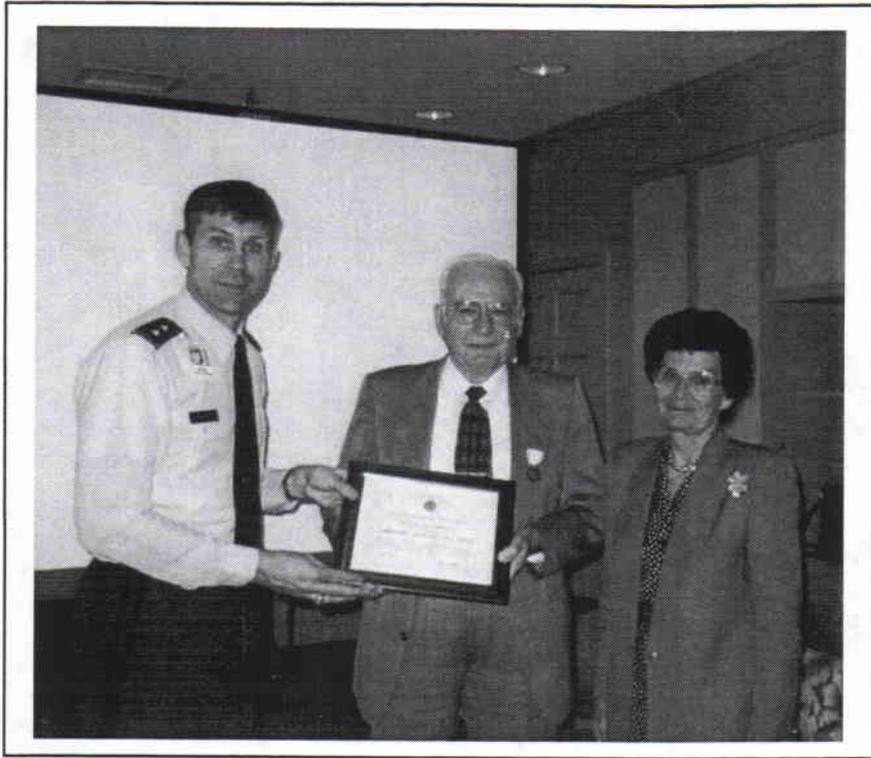
After serving as Treasurer of the not-appropriated fund of the U.S. Section, PIANC, for more than ten years, Mr. Lyle C. McLaren, Jr., resigned. In recognition of his outstanding achievements, he was presented with the Commander's Award for Public Service on April 29, 1998, at the U.S. Section, PIANC Commission meeting by MG Russell L.

Fuhrman. He was also presented with a ship's clock as a token of appreciation for his tireless efforts on behalf of the organization.

Mr. McLaren was the first member-volunteer to fill the position of treasurer following the 1988 reorganization of the U.S. Section. He exercised judicious stewardship and initiated numerous improvements in accounting procedures, resulting in improved management of the not-appropriated fund. At the international level, he served as Vice-Chairman of the Finance Commission, and influenced the adoption of sound management processes. See photographs on next page.

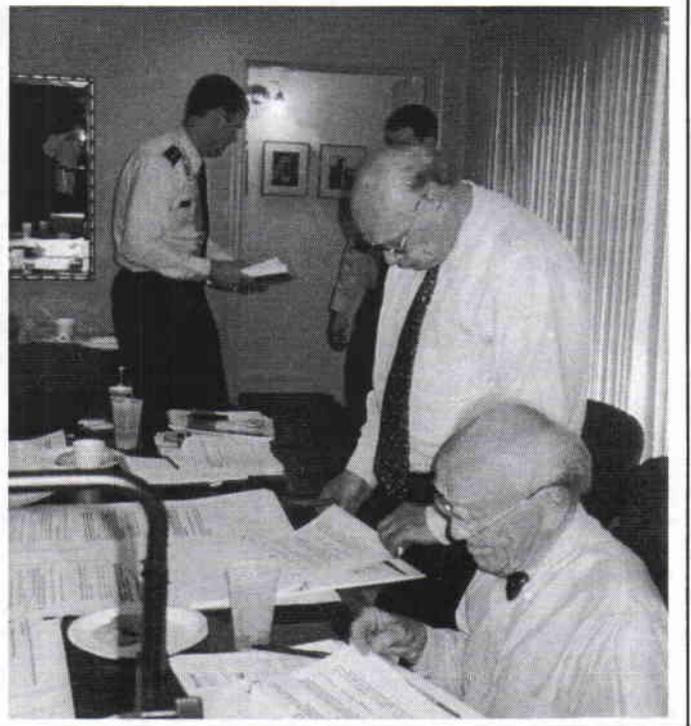
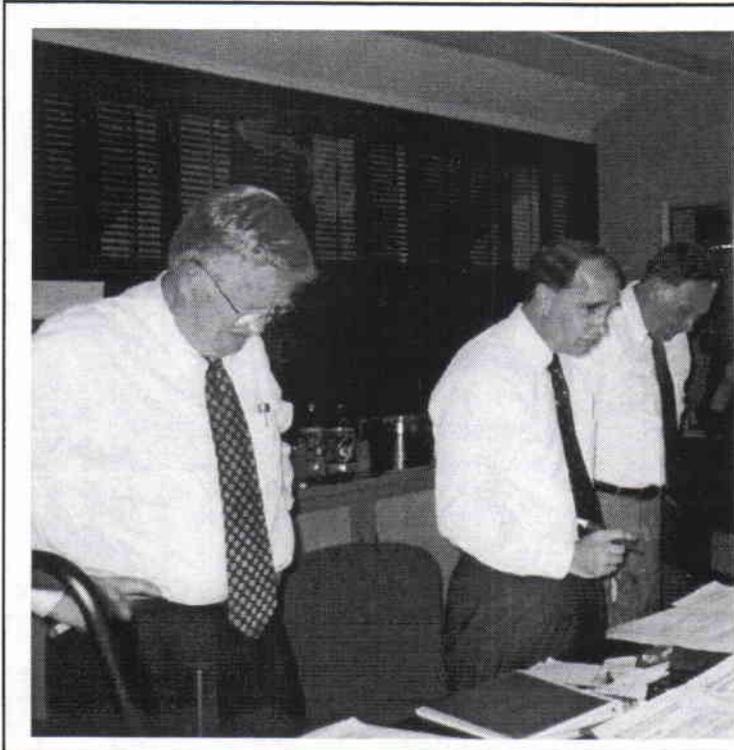
Taking Mr. McLaren's place as the new Treasurer is Captain James R. Carman. Captain Carman has a broad and up-to-date knowledge of port and intermodal developments in the United States. He has been involved in the direction and management of important studies sponsored by the Maritime Administration and continuous activities in planning and research on port matters. Between 1987 and 1995 Captain Carman served as Chief, Division of Port and Intermodal Planning and later as Chief, Division of Ports, Office of Ports and Domestic Shipping in the Maritime Administration. He also has first-hand experience as an executive director in one of the U.S. Great Lakes ports and as agent for shipping lines in Cleveland, Detroit, and other lower lake ports.

Captain Carman graduated from the Massachusetts Maritime Academy, and later earned a Bachelor's degree in economics from Harvard University and a Master's degree in economics from Cleveland State University.

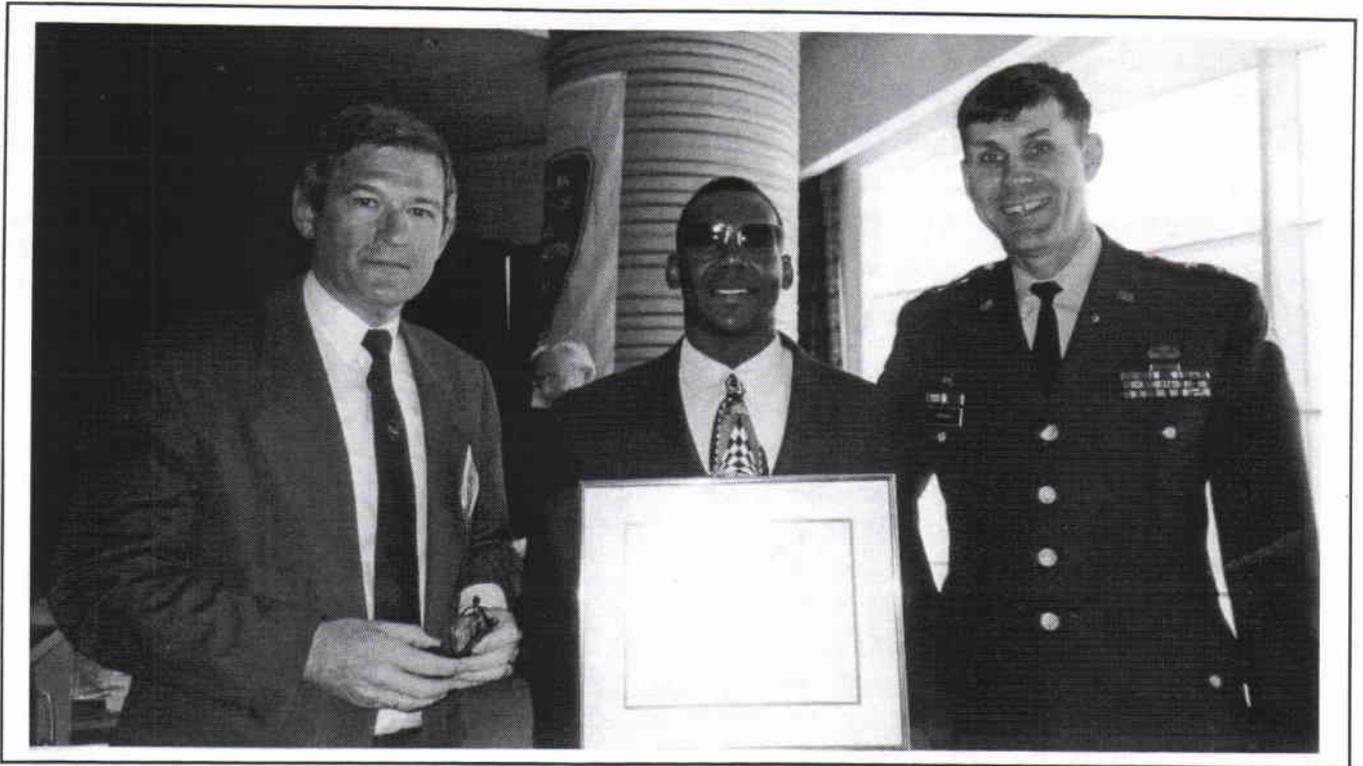


Commander's Award for Public Service presented to Mr. Lyle C. McLaren, Jr. by Major General Russell L. Fuhrman along with Mrs. Fran McLaren, April 29, 1998.

Mr. & Mrs. McLaren with ship's clock that was presented for his tireless efforts.



Commissioners at Work. Right to left - Mr. Bob Nichol, Mr. Kurt Nagle, Mr. Walt Ritchie, MG Russell L. Fuhrman, Major Mike Teague, Dr. Anatoly Hochstein, and new treasurer, Capt. Jim Carman.



Willems Award Presented to Lloyd M. Coakley at PORTS '98. Left to Right - Mr. Charles Van Begin, Secretary-General, PIANC, Lloyd M. Coakley and Major General Russell L. Fuhrman.



Award Presented to the U.S. Army Corps of Engineers. The Port of Los Angeles and the Port of Long Beach jointly presented an award in recognition of 100 years of service by the Corps to the Ports. Colonel Larry Davis is shown holding the ship's wheel presented to the District by Larry Keller and Richard Steinke. Left to Right - Dr. John H. Zirschky, A/ASA (CW), Larry Keller, Executive Director, Port of Los Angeles, COL Larry Davis, DE, Los Angeles, Richard Steinke, Executive Director, Port of Long Beach, MG Russell L. Fuhrman, Director, CW, BG Richard Capka, DE, South Pacific

(The following article, which was published in part in the Winter 1997/98 Newsletter, is being reprinted because the concluding paragraphs were inadvertently omitted.)

INNOVATIVE WATER INJECTION DREDGING TECHNOLOGY USED IN A FIRST FOR NEW ORLEANS HARBOR

by Edmond J. Russo, Jr.

Originally developed and used in Europe, the Water Injection Dredge (WID) recently entered the United States dredging market. The WID has largely gained work at private dock facilities located on the Mississippi River.

Catching the eye of Corps dredgers, the New Orleans District (NOD) recognized the WID's potential for cost-effective employment along the New Orleans harbor wharves on the River.

Historically dredged by cutterhead dredges on average about two times per year, the New Orleans harbor work represents a relatively large amount of annual dredging work--generally between 1 to 3 million cubic yards of silts and sands. The WID's performance on non-Corps Mississippi River projects made its use practical for this New Orleans harbor work. The recent inclusion of the WID in bidding for New Orleans harbor dredging raised the prospect for saving money on the project.

The movement of the WID-generated slurry out of the dredging area is governed in large part by a density gradient. In general, this means that the heavier-than-water slurry causes an imbalance in static forces between

the slurry and the surrounding water. This results in movement of the slurry away from its original location to a lower elevation in the waterway.

To generate the slurry, the WID uses twin articulated training arms that suspend a horizontal pipe over the dredging location. This pipe is outfitted with a series of nozzles that point towards the channel bottom. The nozzles discharge the water into the shoal material at high volume and low pressure. When this technique is used on a relatively high point along the bottom of the waterway, the slurry seeks a deeper elevation in the waterway. The result at the dredging location is an area cleared of shoal sediments. In general, the finer the sediments, the greater the WID's effect.

The WID uses only a fraction of the equipment and labor necessary by cutterhead dredges to accomplish essentially similar dredging jobs. During implementation, the result is likely to be more cost effective dredging as compared to conventional methods.

NOD included the WID with cutterhead dredges into the bid lots for the fiscal year (FY) 1997 New Orleans harbor leased maintenance dredge solicitation. A previously-developed and tested pay-for-performance (PFP) hourly leased dredge clause was integrated into the specifications to make the WID/cutterhead dredge bidding scenario possible.

With the total low-bid contract price remaining constant, the PFP clauses allow the contractor to be monetarily compensated for dredging time in proportion to the actual rate of dredging performed during that period. The actual payment is adjusted to reflect this

performance, relative to the low bid unit price and prespecified minimum dredge production rate for a pre-defined standard dredging condition. As a result, the dredging project can be completed for an optimal dredging rate and completed in a faster time frame. In other words, the faster a contractor can complete and be paid for a quantity of contract work, the less the number of costly labor and equipment days are likely to be assigned to the initial contract bid. Even more significant, this type of contract allows for multiple-dredge type bidding for the same work.

In February 1996, the first of its kind New Orleans harbor WID/cutterhead dredge contract was to be bid. However, an industry pre-bid protest questioning the multiple-dredge type bidding methodology led to a one-year delay in the opportunity for a possible first use of the WID in the harbor. After several months of litigation, the United States Court of Federal Claims allowed the project bidding to commence.

The NOD proceeded with the contract in the FY 1998 dredging cycle, which caused an increase in bidding competition. This resulted in a low bid price of the WID on the order of about 20% less than the next highest bid prices for the harbor work.

POC is Edmond J. Russo, Jr., (504) 862-1496

MARINE TRANSPORTATION UNDERGOING REVIEW

In anticipation of a substantial increase in the demand for marine transportation in the next century, Secretary of Transportation Rodney E. Slater has announced efforts to ensure that our waterways and ports are ready

for the challenge. At a meeting held on March 20, 1998, in Washington, D.C., Secretary Slater said that a review of marine transportation would help "develop comprehensive strategies to address the dynamic growth in shipping and serve as a means to improve the nation's waterways, ports, and intermodal connections."

As a first step in this review, federal partners got together with members of the private sector and other interested parties from port maritime, environmental, recreational and fishing organizations. Attendees at this initial meeting for the worldwide management initiative included Steering Committee Members MG Russell L. Fuhrman (U.S. Section, PIANC President), U.S. Army Corps of Engineers; Mr. John Horsley, Associate Deputy Secretary Designate (DOT); Mr. Kenneth Wykle, Federal Highway Administration; and RADM Robert North, U.S. Coast Guard.

Port authorities are currently hosting a series of seven regional listening sessions to hear the views of users and operators and gather information. The object is to see what the nation has to do to get from where we are today to the 21st Century, such as hooking seaports up intermodally. The two-day sessions are taking place in New Orleans, Louisiana; Oakland, California; New York, New York; Cleveland, Ohio; St. Louis, Missouri; Charleston, South Carolina; and Portland, Oregon, from March 31 to May 19. A representative cross section of personnel from the region's ports, terminals, pilots, vessel operators, truckers and others are being selected to present future needs of our marine transportation system to accommodate expansion in international trade.

Secretary Slater will host a national conference in the fall of 1998 in Washington, D.C., to address solutions and explore strategies for key issues identified regionally at the seven listening sessions. The conference will also develop a vision and better approach for delivery of federal services.

For more information, please contact the USCG Waterways Management Directorate at (202) 267-6164 or the MARAD Office of Ports and Domestic Shipping at (202) 366-4357.

PIANC's 29TH INTERNATIONAL NAVIGATION CONGRESS

The final announcement for the 29th International Navigation Congress, which will be held in The Hague, The Netherlands, September 6-11, 1998, has been distributed. The International Exhibit of Ports and Navigation will take place simultaneously with the Congress.

There will be a series of technical presentations on deep-draft, shallow-draft, recreational navigation, and environmental subjects. Two Sections will run in parallel sessions: Section I, Inland Navigation, and Section II, Maritime Navigation. The technical program for the Congress will include visits to the ports of Amsterdam and Rotterdam, and for the first time, there will be a session devoted to individual papers. In addition, there will be a celebration of the bicentennial of Rijkswaterstaat. This important navigation congress is held every four years, so please plan to attend. For more information, contact Mrs. Robertson, U.S. Section of PIANC, TEL: (703) 428-6286, FAX: (703) 428-8171.

INDIVIDUAL PRESENTATIONS AT 29TH CONGRESS

There will be eight individual presentations at the 29th International Navigation Congress of PIANC, supplementing the traditional presentations of national papers on deep-draft and shallow-draft subjects.

One of the papers selected was written by Dr. Dennis P. Robinson and Dr. Harry H. Kelejian and is titled, "Returns to Investment in Navigation Infrastructure: An Equilibrium Approach." The authors contend that studies attempting to determine the productivity effects of public infrastructure investments have long overlooked the role that public infrastructure, especially transportation infrastructure, has in the trade and transportation of goods and services and its impact on the technological processes of firms within the economy. Dr. Robinson's and Dr. Lekejian's paper models the effects of navigation infrastructure investment on certain segments of the U.S. economy via the "factor cost/product price" effect logic. The paper estimates the response to investment in navigation infrastructure in terms of a model which accounts for economy-wide systems interactions. The results suggest that investment in navigation capital has a positive effect on the economy.

Harry H. Kelejian received his B.A. degree from Hofstra University and his M.A. and Ph.D. in economics from the University of Wisconsin. He has taught at Princeton and New York Universities and currently is Professor of Economics at the University of Maryland and a former visiting scholar at the Institute for Water Resources under the

Intergovernmental Personal Act Agreement. He has published a wide variety of articles relating to econometric theory and its applications.

Dennis P. Robinson received his B.A. degree from Southern Illinois University, his M.A. degree from Indiana University, and his Ph.D. degree from George Washington University. He has been an economist for several U.S. government agencies during the past twenty four years including the Bureau of Economic Analysis, the Environmental Protection Agency, and the Army Corps of Engineers (the last twelve with the Institute for Water Resources). His research is in regional and interregional modeling, spatial econometric analysis, and infrastructure productivity.

Dr. Robinson will present the paper on September 10, 1998 at The Hague.

GERMAN MINISTRY IN DRIVE TO GET CARGO OFF HIGHWAYS

A new pilot program, established by Germany's Transportation Ministry, for the nation's inland waterway ports and operators, aims to help shift some of the oversize or unusually heavy cargo loads that clog German highways to the nation's underutilized rivers and canals.

When carriers apply for permits to haul large loads over roads in one of the three German states (North Rhine-Westfalia, Baden-Wuertenberg and Branderburg), copies of the applications will go to inland waterway organizations, which will check to see if the cargo could be shipped by barge. If so, they will encourage their members to use a two day grace period to send in bids to haul the oversized freight.

Heavy cargo experts think inland waterway operators can offer competitive rates in carrying big loads like steel girders, prefabricated building sections, and heavy machinery if given the chance.

Waterborne freight rates have declined dramatically since European Union waterways were thrown open to competition in 1994.

(Reprinted from the Tennessee-Tombigbee Council Newsletter, Vol. 2, 1998.)

ASCE PRESENTS 1997 INTERNATIONAL COASTAL ENGINEERING AWARD

Each year, The American Society of Civil Engineers presents the International Coastal Engineering Award to an individual who has made significant contributions to the advancement of coastal engineering in the form of engineering design, teaching, professional leadership, research or planning.

The 1997 recipient of the International Coastal Engineering Award is Dr. Billy L. Edge for outstanding contributions to the advancement of coastal engineering through his efforts in research and engineering design, university-level instruction and sustained professional leadership.

Dr. Edge has served for 19 years as secretary of the Coastal Engineering Research Council, and he remains an active conference chair, participating in the Coastal Zone 95 and Waves 97 Conferences. As head of Cubit Engineering Limited and later as president of Edge and Associates Inc., he has designed many port structures, beach nourishment projects and offshore coastal structures. In

1993, he joined the ocean engineering program, which he now heads, in the civil engineering department at Texas A&M University. In 1998 Dr. Edge was appointed to the U.S. Army Corps of Engineers Coastal Engineering Research Board.

Dr. Edge is the U.S. Section representative to PTC I, Working Group #36, "*Catalog of Precast Elements*"

UPDATED PORT SERIES REPORTS AVAILABLE

The Navigation Data Center, U.S. Army Corps of Engineers, has recently completed the updating and publishing of several Port Series Reports. These reports delineate the Nation's principal coastal, Great Lakes, and inland port and waterway terminal and transfer facilities with emphasis on facility structure, capability and use.

Recently published reports include:

- Port Series No. 12, Wilmington and Morehead City, NC
- Port Series No. 13, Charleston and Georgetown, SC
- Port Series No. 15, Jacksonville and Fernandina Beach, FL
- Port Series No. 19, Panama City and Pensacola, FL; Pascagoula and Gulfport, MS; and Ports on the Apalachicola, Chattahoochee, and Flint Rivers

Currently in publication with availability by early summer are:

- Port Series No. 8, Philadelphia, PA; Camden, NJ; Wilmington, DE; and Ports on Delaware River

- Port Series No. 37, Port Angeles, Port Townsend, Everett, Anacortes, and Bellingham, WA

Summary information for these and all the ports covered in the Port Series Reports as well as an ordering guide can be found on the Navigation Data Center's web site at <http://www.wrc-ndc.usace.army.mil/ndc>

U.S. FOREIGN WATERBORNE STATISTICS MISSION SHIFTS TO U.S. ARMY CORPS OF ENGINEERS

Effective 1 October 1998, the U.S. Army Corps of Engineers Navigation Data Center (NDC) will assume the responsibility of U.S. foreign waterborne transportation statistics from the U.S. Bureau of the Census. NDC will be announcing information on ordering accessing data through its current web site: <http://www.wrc-ndc.usace.army.mil/ndc>

For more information, please contact David Penick at (504) 862-1404.

**1999 Competition
International
Gustave Willems Award**

**DEADLINE
FOR ABSTRACT: June 15, 1998**

**Questions: Call Mary Jane Robertson
703-428-6286**

OBITUARIES

Noel Ordman - February 25, 1998

Noel Ordman, port designer and administrator for the Port of London Authority and member of PIANC, died in London on February 25, 1998, at the age of 78. This is a loss to his many colleagues in the United States.

Born in Dublin in 1919, he studied civil engineering at Edinburgh University, joining the Admiralty's civil engineering department shortly after graduation. In 1942, Mr. Ordman was commissioned a lieutenant in the Royal Navy and worked in engineering and intelligence. He joined the Port of London Authority, rising quickly as an advocate for modernizing the port. In 1970, Mr. Ordman became the first chairman of the Port of London consultants, working with other dock authorities around the world. He retired in 1979, established his own consulting firm, and continued his work with four major ports in Mexico.

A fellow of the Institute of Civil Engineers, Mr. Ordman was also a freeman of the City of London. He is survived by his wife, Marie Louise, a son and a daughter.

John A. Downs - September 1997

PIANC mourns the loss of John ("Jack") Downs, who died in September 1997. Mr. Downs served as Commissioner of the U.S. Section, PIANC from 1985 through 1988.

Mr. Downs graduated from the University of New Hampshire with a civil engineering degree and later earned a master's degree in civil engineering from the Massachusetts Institute of Technology.

In 1939, Mr. Downs joined Great Lakes Dredge and Dock where he began working as a field engineer on the earth dam project at Franklin Falls, New Hampshire. Holding a reserve commission in the Army Corps of Engineers, he was called to active duty in Africa and Italy and was aboard a troop ship waiting to invade Japan when the war ended.

Transferred to the Chicago Division of the firm in 1948, Mr. Downs became the field manager for several large projects. He served as President of Great Lakes Dredge and Dock from 1966-1980 and again from 1986-1987. He made it his life's work to preserve the private dredging industry by reducing the Corps of Engineers' dredge fleet. He was selected as one of two industry representatives on an Advisory Committee conducting a National Dredging Study. He also served as the president of the National Association of Dredging Contractors for 14 years. Three years after his retirement, the Corps Minimum Fleet was established, ending the Corps' dominance of dredging maintenance work.

Eugene H. Harlow - January 7, 1998

The U.S. Section, PIANC notes with sorrow the death of Eugene H. Harlow, 84, on January 7, 1998.

Mr. Harlow was an Honorary International Member of PIANC, receiving this recognition for lengthy service to the association. During the 1980s, he served as Principal United States Section Representative to the Permanent Technical Committee II. He also served as a U.S. Representative to the Joint Commission for Advice on Sport and Pleasure Navigation, where he contributed to various working groups investigating international navigation considerations of recreational boating. He brought many years of personal experience as a practicing yachtsman to the commission,

and he was particularly interested in special navigation aides and chartering matters as they pertain to recreational boating. Mr. Harlow's contributions to the PIANC quarterly bulletin, included several articles on the stability of harbor breakwaters.

Mr. Harlow earned a master's degree in engineering from Harvard University in 1935. He was a recipient of the John G. Moffatt-Frank E. Nichol Harbor and Coastal Engineering Award from the American Society of Civil Engineers (ASCE). In addition to being a member of ASCE, he belonged to numerous other organizations, including the American Association for the Advancement of Science, International Society of Soil Mechanics and Foundation Engineers, Society of Military Engineers, Marine Technology Society, National Society of Professional Engineers, and Marine Board of the National Research Council.

Prior to retirement, he had been Vice President of Soros Associates Consulting Engineers and the Executive Vice President of Frederic R. Harris, Inc., both located in New York City.

He is survived by his wife, Joyce Harlow, of Houston, Texas, and four step-children.

Vernon L. Ljungren - April 21, 1998

A private memorial service was held on April 25, 1998 for Vernon L. Ljungren at the Takoma National Cemetery in Kent, Washington. Mr. Ljungren, who served as the U.S. Section, PIANC Commissioner from January 1977 to December 1984, died on April 21, 1998, at the age of 72.

Mr. Ljungren was the director of the Sea-Tac Airport from 1983 to 1988 and served as the chief engineer for the airport from 1971 to

1983. He was also instrumental in getting concourses B, C and D of the airport rebuilt as well as expanding the South Satellite.

Mr. Ljungren graduated from the University of Minnesota and the American Management Association and served in the Navy during World War II.

He is survived by his wife, Lois, a son and two daughters.

**Meeting of the
U.S. Section PIANC**

*Memphis
In May*

12-14 May 1999

**Host:
Port of Memphis**

INSIDE PIANC

31 July 1998	PTC II Working Group, #34 "The Effect of Earthquakes on Port Structures". P.O.C. Brad Erickson TEL: (206) 453-5000	Seattle, WA
6-11 Sep 1998	29th International Congress PIANC POC: Mary Jane Robertson TEL: (703) 428-6286	The Hague, The Netherlands
Feb 1999	PIANC - Sport and Recreation Navigation Committee Meeting POC: Richard Dornhelm TEL: (510) 944-5411	Ft. Lauderdale, FL
12-14 May 1999	U.S. Section Conference POC: Mary Jane Robertson TEL: (703) 428-6286	Memphis, TN

OUTSIDE PIANC

16-20 Jun 1998	Pacific Congress '98 POC: PACON International P.O. Box 11568 Honolulu, Hawaii 96828 TEL: (808) 956-6163 FAX: (808) 956-2580	Seoul, Korea
22-26 Jun 1998	26th International Conference on Coastal Engineering	Copenhagen, Denmark
19-22 Jul 1998	Transportation Research Board Summer Meeting POC: Joedy Cambridge TEL: (202) 334-2167 FAX: (202) 334-2030	Seattle, WA
28 Jun-2 Jul 1998	WODCON XV "Dredging into the 21st Century" POC: Larry Patella, WEDA Executive Director TEL: (503) 285-5521	Las Vegas, NV
24 Sep 1998	PIANC Breakfast @ the National Waterways Conference P.O.C. Mary Jane Robertson TEL: (703) 428-6286	New Orleans, LA
23-25 Sep 1998	National Waterways Conference 1998 Annual Meeting POC: Medina S. Moran TEL: (202) 296-4415 FAX: (202) 835-3861	New Orleans, LA

29 Sept - 3 Oct 1998	Maritime Administration U.S. Department of Transportation SMM '98 Trade Fair Largest Maritime Trade Show in the World POC: USA Pavilion Organizer TEL: (207) 236-6196 FAX: (207) 236-0369	Hamburg, Germany
22-26 Oct 1998	China Transpo '98 Water Transport POC: Mr. Chai Yingjie TEL: +86/10/65125185, 65242933 FAX: +86/10/65242955, 65125183	Beijing, China
28-30 Oct 1998	Gulf Intracoastal Canal Association's 1998 Convention POC: GICA TEL: (504) 586-1473 FAX: (504) 586-1634	Point Clear, AL
15-17 Feb 1999	ICOMIA Third International Marina Conference POC: Ron Stone, IBFC, Chairman c/o NMMA Washington, Harbour 3050 K Street, NW, Suite 145 Washington, D.C. 20007 TEL: (202) 944-4985 FAX: (202) 944-4988	Ft. Lauderdale, FL
21-23 Apr 1999	International Congress on Maritime Technological Innovations and Research TEL: +34 3 401 79 32 FAX: (93) +34 3 401 79 23	Barcelona, Spain
7-10 Jun 1999	American Society of Civil Engineers "Coastal Structures 99" POC: Nobuhisa Kobayashi, University of Delaware TEL: (302) 831-8044	Santander, Spain
22-27 Aug 1999	28th Biennial Congress of the International Association for Hydraulic Research POC: Heinz Bergmann TEL: +43-316-873-6260 FAX: +43-316-873-6264	Graz, Austria
16-21 Jul 2000	27th International Conference on Coastal Engineering	Sydney, Australia



CD-ROM Volumes 1 and 2

HANDLING AND TREATMENT OF CONTAMINATED DREDGED MATERIAL (CDM) FROM PORTS AND INLAND WATERWAYS

A report of the Permanent Technical Committee II, Working Group No.17

WINDOWS

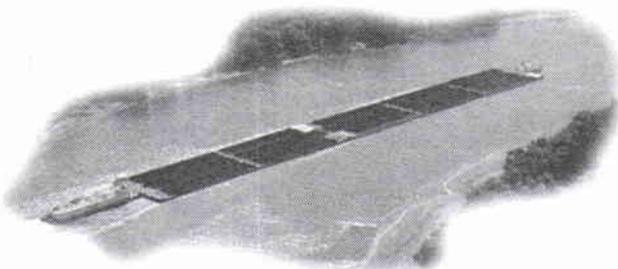
TEXT

TABLES

GRAPHICS

PICTURES

WINDOWS 95



- Volume 1 in English and French
- Reviews, describes and assesses the types and sources of contamination of materials to be dredged from ports and inland waterways,
- Examines the state-of-the-art procedures to manage the CDM,
- Provides a technical framework which is both general and comprehensive to meet the needs of project developers and regulators in the development of alternatives that are environmentally and economically feasible.

- Provides the designer and the regulator with practical information needed for daily use.
- 86 technical fact sheets of commercially available, field applied or tested techniques.
- 18 international case studies of state-of-the-art projects.

WINDOWS

SEARCH

COLOR TEXT

WINDOWS 95

ORDER FORM

Please send mecopy(s) at \$30.00 each of the CD-ROM, Handling and Treatment of Contaminated Dredged Material from Ports and Inland Waterways.

NAME:

STREET/P.O. BOX

CITY STATE ZIPCODE

TEL: FAX

CHECK ENCLOSED FOR \$ Sorry, we cannot accept credit cards.

MAIL TO: U.S. Section, Permanent International Association of
 Navigation Congresses
 CODE PTC II - CD-ROM
 7701 Telegraph Road, Alexandria, VA 22315-3868

Number to call for information: 703/428-7072