



# THE PIANC NEWSLETTER

Permanent International Association of Navigation Congresses

Summer 1996

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## NOTES FROM THE SECRETARY

□ After 42 years of service working in the office of the International Secretariat in Brussels, **Ms. Claire DeCraen**, Administrative Officer, will retire at the beginning of July 1996. Many members of the U.S. Section know Ms. DeCraen and appreciate the tireless manner in which she manages the day-to-day activities of the PIANC office as well as details of committees, commissions, and working groups--carrying it all out in French and in English. To put her years of service into a Corps of Engineers framework, Ms DeCraen's employment coincides with the tours of duty of LTG Samuel D. Sturgis, Jr., through LTG Arthur E. Williams as Chiefs of Engineers and MG Emerson Itschner through MG Stanley G. Genega as Directors of Civil Works.

Ms. DeCraen was recognized by her associates at the recent meeting of the Permanent International Council in Durban, South Africa. Among the honors which Ms. DeCraen received on that occasion was the Meritorious Civilian Service Award, presented by the **Honorable H. Martin Lancaster**, Assistant Secretary of the Army (Civil Works) and President of the U.S. Section. MG Stanley G. Genega presented Ms. DeCraen a notebook containing letters from many of her friends in the U.S. and a wooden plaque embellished with a Corps of Engineers castle.

□ The U.S. Section recently established a home page on the World Wide Web. The home page is the result of work done by **Mrs. Mary Jane Robertson**, U.S. Section Administrative Officer, and **Mr. Michael Walsh**, Civil Engineer with the Institute for Water Resources. At this time, the home page has background information about PIANC, a list of working group reports and an announcement about the annual meeting scheduled for 9-11 October 1996 in Seattle. From time to time, we intend to add information, such as brief summaries of working group reports.

If you have any suggestions about how to make the home page more useful, please send us your ideas. The home page address for the U.S. Section is:

<http://www.wrc-ndc.usace.army.mil/pianc/index.htm>

The Dutch National Section also has an Internet address:

<http://www.minvenw.nl/projects/ndw/home.html>

□ **Mr. Charles F. Lehman**, Vice President, American Commercial Barge Line (ACBL) Company, has been appointed to a second term as a U.S. National Commissioner. As Vice President of Public Affairs for the ACBL, Mr. Lehman represents the corporation at government agencies as well as with Members of Congress and legislative staffs. He has been a member of the Inland Waterways User Board, the Navigation Safety Advisory Council and a Vice President of the National Waterways Conference, Inc. Among his awards are the Distinguished and Meritorious Public Service Awards given by the U.S. Coast Guard. The U. S. Section is fortunate that Mr. Lehman will continue his service to the Association.

□ Several U.S. Representatives were recently appointed to international working groups. They are:

**Dr. Marcia H. Bystryn**, Chief Environmental Officer, Office of Corporate Policy and Planning, The Port Authority of New York and New Jersey. Dr. Bystryn is the U. S. Representative to the Permanent Environmental Commission Working Group Number 4, Environmental Management Framework for Ports.

**Dr. Billy L. Edge**, Bauer Professor of Dredging Engineering and Head Ocean Engineering Program, Texas A&M University. Dr. Edge is the U. S. Representative to the Permanent Technical

Committee II, Working Group Number 36, Catalog of Precast Elements.

**Mr. Jack C. Cox**, Civil Engineer Manager, the Michael Baker Corporation. Mr. Cox is the U.S. Representative to the Special Commission for Sport and Recreation Navigation, Working Group Number 9, Regeneration of Harbour Areas for Sport and Pleasure Navigation Use.

**Mr. David V. Grier**, Transportation Geographer, U.S. Army Engineer Institute for Water Resources. Mr. Grier is the U.S. Representative to the Permanent Technical Committee I, Working Group Number 21, Economic Studies of Inland Waterways.

□ The U.S. Section has received a letter of thanks from **Professor B. Mazurkiewicz** acknowledging the donation made in support of **Professor Yuri Vorobyov** from the Transport Academy of Ukraine in Odessa, to defray his expenses for travel and accommodations in connection with the conference on **Inland and Maritime Navigation and Coastal Problems of East European Countries and Environmental Aspects of Dredging**. The conference, which will be held in Gdansk, Poland, in September 1996, is sponsored by the Permanent Committee for Development and Cooperation. The contribution is made from the not-appropriated fund of the U.S. Section.

□ The International Secretariat has announced that the **1998 PIANC Congress**, which is being organized by the Dutch National Section, will be held from **August 31 to September 4, 1998**, in **The Hague**. Additional information will be forwarded to members in the near future.

□ **Delegates from 19 member nations attended the Permanent International**

**Commission (PIC) meeting** which was held the third week of May in Durban, South Africa. PORTNET, the port authority that owns and operates the public ports in South Africa, was the hosting organization for the meeting.

Technical presentations focused on development and redevelopment of port and coastal areas. Papers were presented on the Port of Durban, South Africa's container handling requirements for the 21st century, extension to the general cargo quay at the Port of Saldanha, the redevelopment of the Victoria and Alfred Waterfront at Cape Town, which includes both a working, commercial waterfront and a festival marketplace, and information on the master plan of the port facilities at Richards Bay. Any member who would like to obtain a copy of one or more of the papers may do so by contacting Mrs. Robertson in the Office of the U.S. Section, PIANC, telephone (703) 428-6286. Other articles on South Africa are published in Bulletin Number 90, March 1996.

Following are several items of business taken up at the meeting of the Permanent International Commission

- **Mr. Harry N. Cook**, President of the National Waterways Conference, Inc., was appointed an International Honorary Member of PIANC (see p.7). Congratulations, Harry!

- **Mr. John H. Sargent**, Chief Delegate of the United Kingdom, completed his term as an International Vice President and was awarded the title of Honorary Vice President. Mr. Sargent has been a member of PIANC for 30 years. Among his many contributions to the association are the design of the new logo, the Strategic Plan and several proposals to restructure the format of Congresses.

- **Ministerialrat Dipl.-Ing. Norbert Krause**, the Chief Delegate from Germany, was installed as an International Vice President to fill the vacancy created by the retirement of Mr. Sargent.

- The **Membership Chairman** reported that the total membership stands at 2,560, an increase of 300 new members, and member nations total 42. The Italian and U.S. Sections were congratulated by the President for recruiting new members.

- Discussion of financial matters included a resolve that the next Congress be organized to make a profit. The rising expense of printing and distributing working group reports generated discussion concerning a limit on the number of working groups approved annually, reserving the funds for printing and distribution at the time a working group is established, and limiting distribution to those who have a specific interest in the subject. Members said that considering the speed with which technology moves, delays in publishing working group reports, due to financial restrictions, reduce the value of the technical report.

- On the subject of **PIANC Publications**, it was reported that an average of 600 pages is printed annually using 5 tons of paper. We will try to reduce the amount of paper being used through a combination of print publication and electronic production. We are also considering publishing the 1998 Congress on disks in addition to making the papers available on the Internet.

- **President De Paepe** announced that consideration was being given to adopting a new, shorter name for the Association that would be more compatible for use on the Internet. Relevant to that, Mr. John Sargent, suggested that the **Statutes** be reviewed and

revised to include adjustments brought about by the adoption of the **Strategic Plan**. He added that the question of a name change should properly be included in the revision of the regulations. The Secretary General reported that he hoped, after strengthening some of the French terminology in the document, to publish the **Strategic Plan** in Bulletin Number 92. Further discussion indicated that there are more options than priorities in the plan. Moreover, the organization would require some adjustments to bring it into conformity with the **Strategic Plan**.

- On the subject of papers for the 1998 Congress, **Dr. Anatoly Hochstein** expressed his concern that some subjects were too narrow and others too broad, resulting in difficulties for authors. He suggested that better descriptions of the scope of subjects were needed. President De Paepe asked for written proposals that clarify subjects be sent to the Presidents of Permanent Technical Committees I and II before the end of June 1996.

- **Mr. Ordman** from the United Kingdom commented on the importance of continuing the good relationship established between PIANC and the **International Maritime Organization (IMO)** through the work of Mr. Paul Lacey (U.K. Section) and others. He urged delegates to offer assistance by attending IMO meetings and supporting Mr. Lacey's **IMO** work. Decisions of the IMO often result in conventions that eventually become international law.

- The new Chairman of the **Permanent Committee for Development and Cooperation (PCDC)** is **Professor Hugo Velsink** from The Netherlands, who is replacing **Mr. Robert J. A. Simeon** of Belgium. The new Vice Chairman is **Mr. S. Ghosh**, member of the India Section.

**If you would like additional information about the work of the Association, please contact the Office of the U. S. Section, PIANC at (703) 428-6286.**



From left to right: Richard Dornhelm, Moffat and Nichol Engineers, Conference Organizer; the Honorable H. Martin Lancaster, Assistant Secretary of the Army (Civil Works) and Chairman, U.S. Section, PIANC; RADM Rudy K. Peschel, U.S. Coast Guard, luncheon speaker; and MG Stanley G. Genega, Director of Civil Works, U.S. Army Corps of Engineers, and President, U.S. Section, PIANC.

## **WORKSHOP ON VESSEL TRAFFIC CONFLICTS ON WATERWAYS**

Vessel traffic conflicts are a growing concern to waterway users and the government agencies responsible for waterway management and safety.

In some cases, the conflicts create immediate safety concerns. In others, they impact the quality of the boating experience or the waterway carrying capacity, limiting



RADM Rudy Peschel explains use of new personal life vest, being demonstrated by Capt. Paul Dinkle, U.S. Army Engineer Liaison Officer with the U.S. Coast Guard.

Presentations included user, federal and state and local concerns and programs as well as boat traffic analyses and specific case studies. Some of the ideas proposed were:

- Formal basic boating training.
- Videos showing dangers of waterways/signs/alcohol.
- Focus on navigational aids and increased education.

Workshop participants also recognized the need for funding for effective enforcement of existing boating rules and regulations and partnering

recreational opportunities. The majority of these conflicts occur on inland lakes and rivers, often between recreational users.

programs between government and responsible boating industry organizations to enhance safety.

A May 10, 1996, workshop held in Washington, D.C., brought together waterway user groups with government agencies. The theme of the workshop was **Vessel Traffic Conflicts on Waterways Used by Recreational Boaters**. In a combined panel, participants discussed the traffic congestion on waterways used by recreational boaters and the approaches being considered to solve this problem, including:

- Vessel traffic control for larger commercial vessels.
- Limiting the number of recreational boats with use permits.
- Restricting recreational boating activities.



Ms. Marge Hegy is making a presentation during the final panel of the workshop. Seated at the speaker's table, from left to right, are Mr. Richard Otto, Mr. Ron Stone, Ms. Margot Brown, Mr. Howard Park, and Cmdr. John Davin.

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## THE LONDON CONVENTION

In the early 1970s, large portions of near-coastal marine waters were becoming severely degraded. This was partly due to unregulated dumping of waste materials.

The United States proposed a convention to regulate ocean disposal to the United Nations. Subsequently, a global treaty was drawn up to develop and agree on minimum controls for ocean disposal and establish a basic regulatory regime in 1975.

The U.S. Army Corps of Engineers (USACE) participated in the first and all subsequent Convention meetings, playing a significant role in drafting the guidelines for dredged material management in ocean waters.

Under the direction of Mr. William Murden, then Chief of the USACE Dredging Division, PIANC became an active observer to the Convention in the mid-80s. Observers, while having no formal vote, can enter the debates and submit technical articles describing positions of their constituents on related issues. PIANC has been very influential with Convention agreements impacting on navigation and port interests.

The U.S. is signatory to the Convention on the Prevention of Marine Pollution by the Dumping of Waste and Other Matters--London Convention-1972. The London Convention meets two to three times a year and agrees on criteria, standards, prohibitions, allowances and management protocols that form the minimum requirements for U.S. domestic regulations for the disposal of dredged material and other allowed materials into marine waters.

There are 72 nations signatory to the London Convention. Decisions reached at meetings

are considered binding by the member nations. In the U.S., decisions are implemented through the Marine Protections Research and Sanctuaries Act (Ocean Dumping Act). The next meeting of the London Convention is a special Diplomatic Conference scheduled for 28 October to 8 November in London.

The Diplomatic Conference is the culmination of five years of preparation, debate, and consultation by the member nations to revise the current London Convention. The revisions will make guidelines on ocean disposal and polluting activities more stringent.

The new London Convention will incorporate many new principles of environmental protection and waste management. It will also ban ocean disposal of all wastes and other materials with a few exceptions, such as dredged material, offshore platforms, natural organic materials, and inert material of natural origin-- the Reverse List. Thus, the agreements reached at the Diplomatic Convention this fall will have far reaching effects on the future of waste management in ocean waters.

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## NEWS OF COMMITTEE ACTIVITIES

The **Shallow Draft Waterways and Ports Standing Committee** held its organizational meeting in St. Louis on March 18, 1996. Members agreed to hold two committee meetings a year--one during the annual Industry Day meeting held in the spring and one during the annual National waterway's Conference held in the fall.

Some of the committee's activities will include recommending subjects of interest for papers and workshops; reviewing periodicals for new trends; assisting members in drafting

papers on issues of interest to PIANC; and acting as liaison with other groups sharing mutual interests.

Point of contact: Charles F. Lehman, Vice President, American Commercial Barge Line Company.

Telephone: 812-288-0533

Fax: 812-288-0227

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## **COOK ELECTED PIC HONORARY MEMBER**

Harry N. Cook of Washington, D.C., President of the National Waterways Conference, was recently elected an Honorary Member of the Permanent International Commission (PIC). The PIC is the governing body of PIANC.

Nominated by MG Stanley G. Genega, Director of Civil Works for the Army Corps of Engineers and President of the U.S. Section, PIANC, Mr. Cook was elected at the PIC annual meeting held in Durban, South Africa. Mr. Cook was a member of the U.S. delegation, which was led by The Honorable H. Martin Lancaster, Assistant Secretary of the Army (Civil Works).

Starting in 1978, Mr. Cook served two four-year terms as a U.S. Commissioner of PIANC, and he is now a Commissioner Emeritus of the U.S. Section. As an Honorary Member of PIC, he will be invited to participate in future PIC meetings, which are held in various port and waterway cities, in the U.S. and abroad.

Accepting the honor, Mr. Cook praised the "international perspective" of PIANC. "The challenges facing navigation programs in one country are frequently similar to those arising in other countries," he said, "but these challenges are often addressed quite differently."

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## **FULL STEAM AHEAD ON PORTS '98**

The U.S. Section, PIANC and the American Society of Civil Engineers' Ports and Harbors Committee of the Waterway, Port, Coastal and Ocean Division are co-sponsoring Ports '98.

This specialty conference, titled "Port Development as Transportation Centers," will be held at the Long Beach Convention Center in Long Beach, California, from March 22-25, 1998. It will cover a broad spectrum of timely and pertinent technical topics pertaining to port and harbor facilities and the increasing challenges of transportation access to ports.

Selected topics of discussion will include:

- Operation and design of container terminals
- Intermodal rail transfer facilities
- Breakbulk and bulk handling facilities
- Petroleum terminals
- Highways, railroads, bridges and grade separations
- Military facilities
- Commercial waterfront facilities
- Recreational facilities
- Small craft harbors
- Maintenance and repair of port facilities
- Geotechnical and dredging issues
- Environmental issues
- Terminal equipment design.

This specialty conference will be accomplished under the auspices of the Ports and Harbors Committee of the Waterway, Port, Coastal and Ocean Division. The Port of Los Angeles, the Port of Long Beach, the consulting firm of Moffatt & Nichol Engineers, the Los Angeles Section of ASCE, and others in the port engineering community have offered substantial support in organizing the conference.

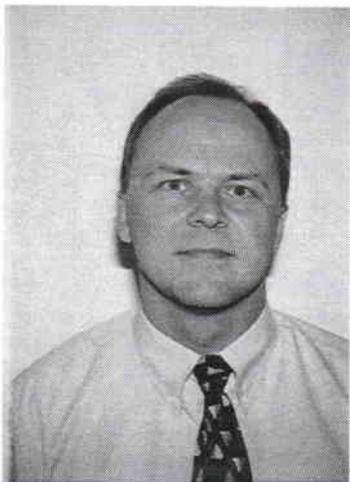
Conference proceedings (papers) will be published in two volumes by ASCE and will include both ASCE and PIANC papers in the same volumes. Space for booth-type exhibits will be available.

This will be the eighth in a series of specialty conferences on port design organized every three years since 1977 by the Ports and Harbors Committee. The U.S. Section, PIANC has been a co-sponsor since 1992.

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## **1996 WILLEMS AWARDEE ANNOUNCED**

The U.S. Section, PIANC Gustave Willems awardee for 1996 is David B. Swanson. Mr. Swanson will be honored at the Seattle, Washington, Annual Conference of PIANC.



Mr. Swanson's paper was titled "Observations from the Kobe Earthquake and Lessons Learned for Reducing the Seismic Vulnerability of U.S. Ports." As a member of a reconnaissance team of engineers, the author researched the Kobe earthquake damage and its implications for U.S. ports.

While providing an overview of the Kobe earthquake, Mr. Swanson focused on the importance of ports and how U.S. ports, in

particular, can better prepare their facilities to withstand the devastating effects of earthquakes. He also discussed the general methods for reducing the seismic vulnerability of the U.S. and international port-related lifeline structures.

Runners-up were: Shanon A. Chader, Buffalo District, paper titled "Rochester Wave Surge Reduction Project," and Leslie Lew, Sacramento District, paper titled "Prospect Island Fish and Wildlife Habitat Restoration."

Look for all three papers in the PIANC International Bulletin in the near future. Congratulations to all the winners!

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## **FORMER WILLEMS AWARDEE TAKES TOP PRIZE**

Robert Davinroy, the 1990 Gustave Willems Award winner, was recently awarded again. Mr. Davinroy received the 1996 Innovation Award presented by the Academy of St. Louis, an award given annually to scientists under the age of 40 for superior accomplishment.

Mr. Davinroy was honored for his work in developing the bendway weir, a submerged rock structure that widens the navigation channel through river bends. The bendway weir makes navigation safer and improves the riverine ecosystem. Mr. Davinroy also created a new river engineering concept called micro-modeling, an inexpensive method for finding answers to complex hydraulic problems.

The Innovation Award was presented to Mr. Davinroy last March at a dinner held by the Academy of Science of St. Louis at the Missouri Botanical Garden.

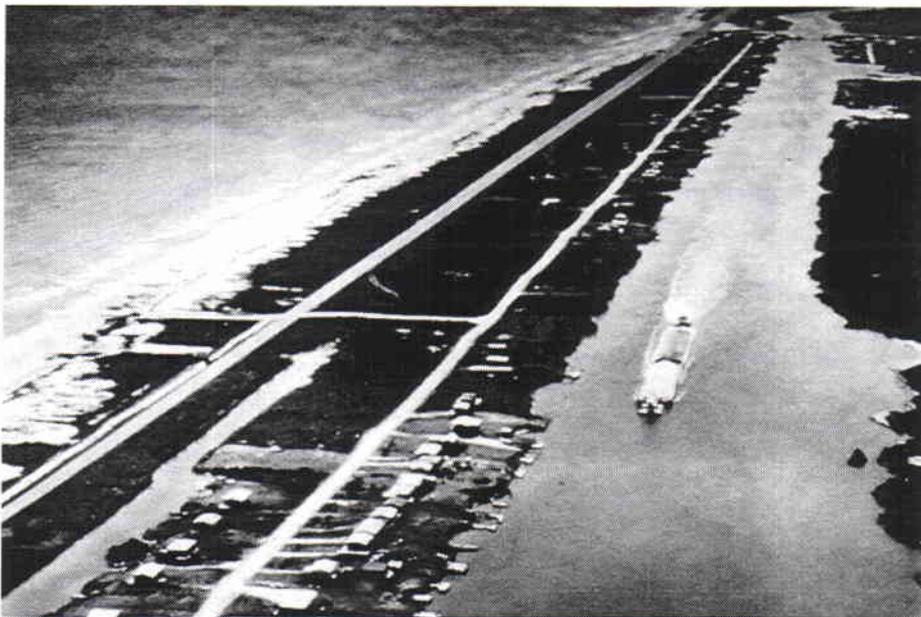
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## **AN EXPLOSIVE DREDGING SITUATION**

The Toussaint River is near the former Erie Army Depot, a Department of Defense facility active from 1918 to 1965, where ammunition was tested by firing at targets on or near Lake Erie. Under the Defense Environmental Restoration Program for Formerly Used Sites, this area has undergone several clean-up efforts. Operators found a live 60-mm mortar round in their dredge's cutterhead during routine dredging operations as recently as 1991.

In 1995, a dredging demonstration on the Toussaint River evaluated the effectiveness of a clamshell dredge bucket. During the demonstration, additional engineering and safety controls were used to remove ordnance and separate and dispose of sediment from the ordnance.

A video camera recorded the monitoring equipment and allowed dredging operations to be observed from within. If ordnance was observed on the video screen, unexploded ordnance personnel alerted the crane operator and the pump operator to cease operations. A



Sargent Beach: Before

flashing red beacon was switched on until they had properly disposed of the ordnance. Ordnance items were sandbagged and transported to the ordnance disposal area, 1500 feet north of the Toussaint River.

The U.S. Coast Guard in Cleveland, Ohio; local government agencies; and all area yacht clubs and marinas were notified by mail thirty days before the project began. They knew the area affected by the project, the hours the channel would be closed for dredging, and the times the channel would be open for vessel traffic.

During dredging periods, all vessel traffic was prohibited from entering the safety zone. All operation personnel were restricted to blast protected areas, a minimum of 52 feet away from the clamshell bucket and screens.

The contractor removed 6 live pieces of unexploded ordnance and 31 inert ordnance items, proving that dredging in ordnance-contaminated waters is feasible using appropriate safety precautions.

(The US Army Engineering and Support Center, Huntsville, Alabama, provided ordnance and explosives support to this project.)

Point of contact: Judy Wilson,  
U.S. Army Corps of Engineers,  
Huntsville Division,  
205-895-1693.

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## **CORPS PROJECT TRANSFORMS TEXAS COMMUNITY**

SOLD! That's what local real estate signs say to visitors who drive through this tiny community of 200 people.



Sargent Beach: After

Two summers ago, visitors to Sargent Beach, a small barrier island in Texas, would have seen a different picture. Weather-beaten FOR SALE signs were being displayed on properties that had been on the market for several years.

What caused this transformation? The answer is the U.S. Army Corps of Engineers' ongoing Sargent Beach revetment project.

Historically, this 10-mile segment of the Gulf Intracoastal Waterway (GIWW) has experienced the highest erosion rate along the entire 426-mile Texas Gulf Coast. According to Dr. Robert Morton, a senior research scientist with the Bureau of Economic Geology at the University of Texas at Austin, erosion has occurred naturally up and down the Texas coast for thousands of years.

Dr. Morton says the process was accelerated here after the City of Freeport, about 20 miles northeast from Sargent Beach, re-routed the mouth of the Brazos River in the late 1920s. This was done to control the silting at the

Freeport Harbor entrance, impacting on the sediment which naturally replenished the shoreline along Sargent Beach. As a result, an estimated 500,000 cubic yards of material are forfeited to erosion each year. Sargent Beach would require that much each year to maintain its existing shoreline, which has been reduced to less than 800 feet in most places.

The soil at Sargent Beach consists of a thick layer of clay and silt covered only by a thin veneer of sand. Large, alligator-scale-like cracks form on the clay and silt material after baking under the hot Texas sun. The cracks form into rectangular blocks that fall victim to the pounding waves from the Gulf of Mexico. This erosion caused the shoreline to retreat towards the GIWW at an alarming rate, threatening a breach which would impact on navigation and commerce.

The Corps revetment project at Sargent Beach is currently under construction, and when completed in January 1988, will extend about 8 miles. It consists of a granite rock revetment and two sections of concrete sheet piles. The project is being cost shared on a 50/50 basis between the U.S. Treasury and the Inland Waterways Trust Fund.

The residents of Sargent Beach no longer fear the loss of their homes, businesses and livelihoods to erosion. The Corps project will provide a long-term solution to their problem.

For additional information, please contact Mr. George Alcalá, Project Manager, at (409) 766-6388.

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## NEW INDICATORS AND ESTIMATIONS OF INTERNAL WATERWAY TONS

by Don Leavitt

In this "information age," people are demanding data earlier. The Corps of Engineers' Waterborne Commerce Statistics Center (WCSC) has tried to meet this challenge by developing sampling methods, estimates and indicators for shorter time periods.

We now have a chart that indicates how much cargo is moving on U.S. inland waterways for a particular month. This monthly tonnage index uses data collected by the Corps' Navigational Data Center (NDC) received monthly from most of its locks across the country.

Each day these locks collect information, including tonnage from barge operators as they wait to pass through. WCSC uses this data to build an index that presents a graph of monthly tonnage trends and comparisons with previous years (see figure on page 12).

As shown in the figure, the past few years show a seasonal trend of lower tonnages in the winter (December to February) when the northern Mississippi is subject to freezing. It is much higher the remainder of the year, gradually rising to a zenith in October. March and April show an upward trend from 1993. Months with flooding in the Midwest show a noticeable decrease in cargo movement. This is especially true not only for July-August 1993, when bad flooding closed several Upper Mississippi locks, but also during May-June 1995. The August-December pattern stabilizes from 1994 to 1995 with little change from one year to the next. Lower winter cargo levels for 1995-1996 are followed by a restoration of 1995 March peak levels.

Don Leavitt, Ph.D., a survey statistician with the WCSC in New Orleans, developed the index. By comparing historical lock tonnage data with official data reported to the WCSC by

vessel operators, and using multiple correlation, he identified eight locks that provided the simplest and best correlation with the WCSC figures.

The total monthly tonnage of these locks is doubled to produce an approximation of the total internal tonnage for the month. This is preferable to a year-long wait for the WCSC information or three months for the annual or quarterly estimates. It also supplies a running comparison for the last 12 months as compared to previous years.

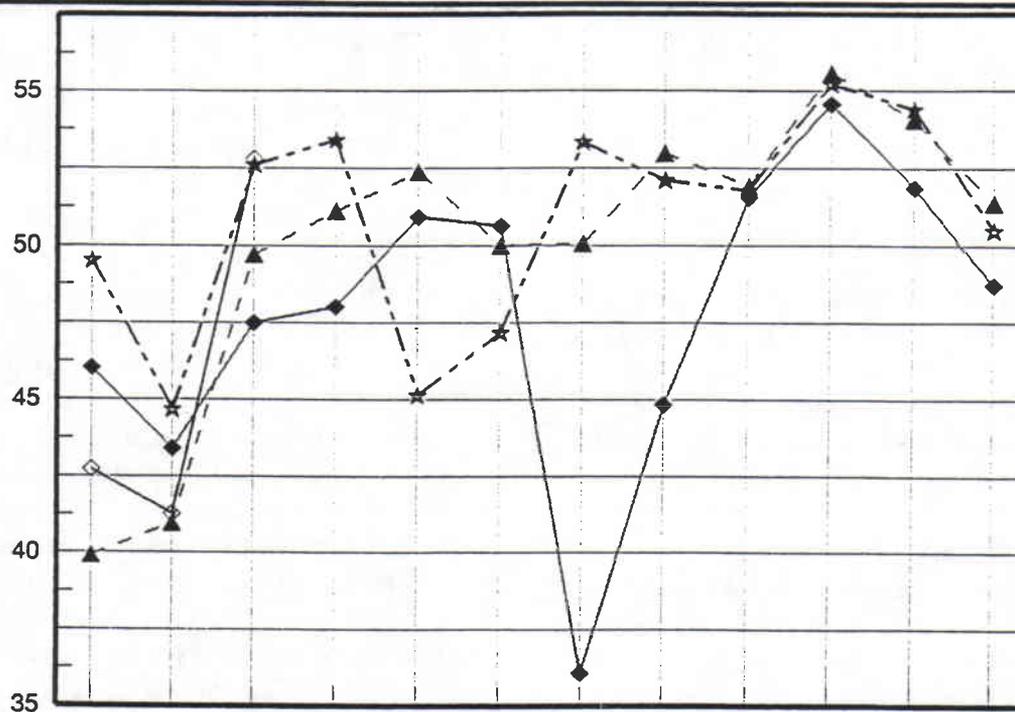
Quarterly estimates for 17 individual waterways are also available now. These are developed for 6, 9, and 12 months for the calendar year, since an estimate based on only the first 3 months is not reliable. They are primarily based on equations using NDC lock data, but comparisons are also made with available WCSC data. The equations are based on correlations with historical data and updated for changing economic patterns. The estimates report relative increases or decreases compared with the previous year for 17 waterways and 4 commodity groups.

The tables and graphs are also available on the Internet and Bulletin Board. An estimate report breaking down these waterways by direction and seven commodity groups is usually available in hard copy by the next mid-year.

WCSC makes graphs and tables available to the public using electronic media through the Internet and the Waterline Bulletin Board (N.D.C.). Please call (703) 428-8458 for more information. The World Wide Web home page is [www.wrc-ndc.usace.army.mil/ndc/wcsc.htm](http://www.wrc-ndc.usace.army.mil/ndc/wcsc.htm). Look for the monthly indicator 35 days after the end of the month.

POC is Charlotte Cook, WCSC, (504) 862-1473 or FAX: (504) 862-1423.

## INTERNAL U.S. WATERWAY MONTHLY TONNAGE INDICATOR 1993-1996\*



Millions of tons	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
◆1993	46.0	43.4	47.5	48.0	50.9	36.1	44.8	51.5	54.5	51.9	48.7	
▲1994	39.9	41.0	49.7	51.1	52.4	50.0	50.1	53.0	51.9	55.6	54.0	51.4
★1995	49.5	44.7	52.6	53.4	45.1	47.2	53.3	52.1	51.8	55.2	54.4	50.5
◇1996	42.7	41.3	52.8									

\*Internal: Moved solely within the boundaries of the U.S. This indicator is for monthly comparison.  
Accumulative April-March tonnage is 1993-4:568, 1994-5:616, 1995-6:600 (-2.6% from 1994-5).

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## BEACH REPLENISHMENT IMPACTS TRAVEL AND TOURISM

What's the key element to tourism in this country? The answer is beaches!

Almost half of all Americans say beaches are their favorite vacation spots. This is supported by the fact that 85 percent of all tourist-related revenues in the U.S. go to coastal states. And the people who visit beaches are primarily concerned with beach erosion. After beach nourishment, beach attendance at Miami Beach increased from 8 to 21 million from 1978 to 1983.

Travel and tourism produce billions for the U.S. In 1995, travel and tourism contributed \$746 billion to the U.S. Gross Domestic Product, making them the second largest sector behind combined wholesale and retail trade. As America's largest employer, travel and tourism employs 14.4 million people!

Furthermore, travel and tourism creates 343,000 new jobs each year, which more than offsets the annual 200,000 job losses in manufacturing. The per capita wages for travel and tourism jobs average \$34,300. That's slightly ahead of the average wage in U.S. industry.

In addition, foreign tourists generated a trade surplus of \$26 billion in 1995. That's about as much as the entire U.S. trade surplus from agricultural commodities. The value of tourism to international competitiveness is just starting to be recognized. The coastal tourism industry is important to our nation.

This article was submitted by the American Shore and Beach Preservation Association. For more information, please contact the Association at (310) 305-9537 or FAX: (310) 821-6345.

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## AWO UNVEILS BARGE AND TOWING INDUSTRY VIDEO

After months of planning, research, and editing, the American Waterways Operators (AWO) announced the completion of a barge and towing industry documentary video, "Barging into the 21st Century."

The inspiration for this eight-minute tape was the long-standing desire of both the barge and towing industry and the U.S. Maritime Administration for an all-purpose, viewer-friendly video to educate the American public on the many contributions this industry makes to our nation's economy.

"What we have now is an important new tool that will help both our organizations to heighten public awareness of the vital role the barge and towing industry plays in our nation's transportation network," said AWO President Tom Allegretti.

The video reflects a "then and now" theme that reflects the barge and towing industry as America's oldest form of transportation, and the efficiency, safety and reliability that make it just as important today as it was in colonial times. A key element emphasized in the video is the industry's commitment to safety.

The video was produced mainly from archive footage borrowed from AWO member companies. The tape features virtually every region of the United States and all segments of the barge and towing industry, including inland, coastal, and harbor services operations. The importance of barge transportation to non-contiguous areas such as Alaska, Hawaii and Puerto Rico is also emphasized, as is the growing tendency to use barges as an intermodal link for goods moving by road or rail.

Copies of "Barging into the 21st Century" are available from both AWO and the Maritime Administration. For more information, please call Ms. Tia Gibbs at AWO at (703) 841-9300.

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## LAKE CARRIERS ASSOCIATION ISSUES ANNUAL REPORT

The Lake Carriers Association (LCA) was founded to represent companies operating U.S. flag freighters on the Great Lakes. Today, the members of LCA and their 59 vessels have the combined capacity to move more than 115 million net tons of cargo annually. Their vessels are engaged in all the major Great Lakes trades except direct overseas exports.

LCA compiles statistical information on ships in service and the amount of cargo carried and publishes brochures and videos on Great Lakes topics of special interest. Some of the important issues currently facing Great Lakes shipping are: advocacy of the Jones Act, U.S. Coast Guard icebreaking services, dredging harbors and channels and ballast water management.

To receive a copy of LCA's annual report or to order any of its publications, please contact the Lake Carriers Association, ATTN: Mr. Glen Nekvasil, 915 Rockefeller Building, 614 Superior Avenue, West Cleveland, Ohio 44113-1383 or FAX: (216) 241-8262; or e-mail: [lcaships@en.com](mailto:lcaships@en.com)

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### PUBLICATIONS:

○ **Longitude - The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time** was written by science writer Dava Sobel.

**Longitude** is the story of John Harrison, the man who invented the chronometer. Not being able to measure longitude was the greatest

scientific problem of Harrison's time. At that time, sailors navigated by following parallels of latitude and estimating distances traveled east or west. But there were too many variables at sea--including changes in temperature, humidity and air pressure. As a result, ships often missed their destinations completely, countless sailors perished, and tons of cargo were lost at sea.

In 1714, the desperate search for an instrument to accurately measure longitude prompted England's Parliament to offer a reward of what today would be about \$12 million. Many solutions were proposed, but none was successful. John Harrison, a clockmaker, came up with a novel mechanical solution, a clock to keep time at sea. Harrison persisted working on his timepieces for several decades, triumphing in 1759.

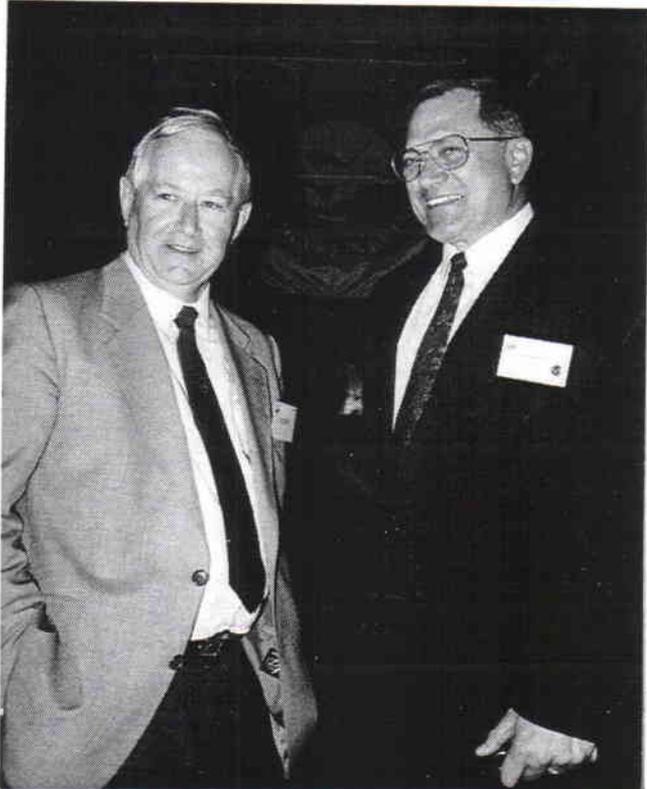
The New York Times Book Review and Book World both praise Ms. Sobel's **Longitude** as "a simple tale, brilliantly told" and John Harrison as "a man you won't forget." **Longitude**, published by Walker & Company, sells for \$19.

○ **Technical Instructions for the Design of Maritime Dikes** was recently published by the Italian Ministry of Public Works and the National Research Council. To receive a copy, please write to:

Consiglio Nazionale delle Ricerche  
Gruppo Nazionale Difesa Catastrofi  
Idrogeologiche  
Piazzale Aldo Moro  
1-00185 Roma, Italia

○ **Dredging: Building and Maintaining Our Underwater Highways**. Available from U.S. Army Corps of Engineers, 20 Massachusetts Avenue, NW, Washington, DC 20314-1000.

Point of Contact: Joseph R. Wilson  
Telephone: (202) 761-8846/Fax: (202) 761-1685

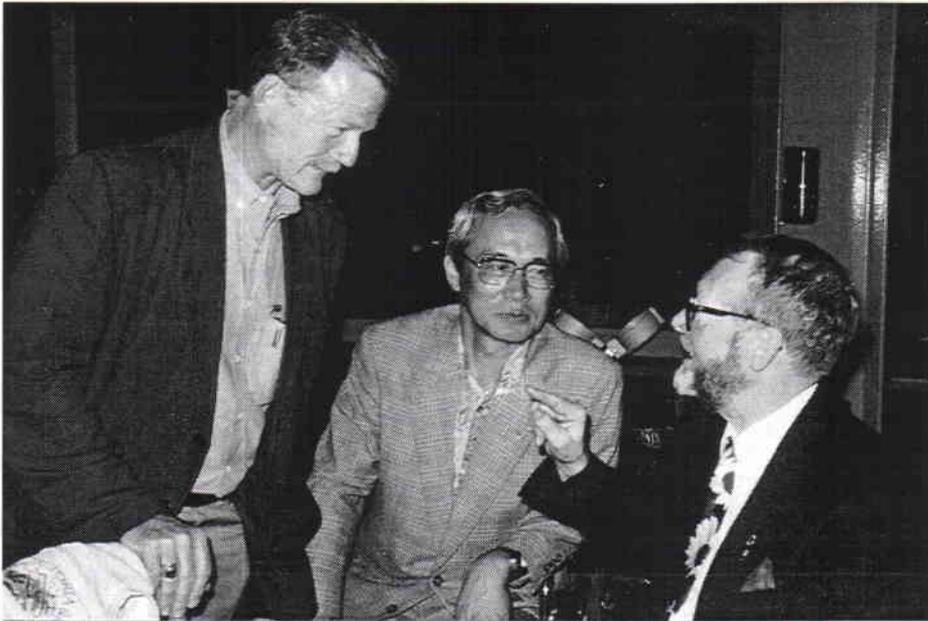


Mr. Arie H. Burggraff, Chief Engineer - Portnet, Host of PIC '96, and Major General Stanley G. Genega, President, U.S. Section, PIANC.

*Pictures of PIC '96 Provided by Harry N. Cook*



Left to right: The Honorable H. Martin Lancaster, Chairman, U.S. Section, PIANC, MG Genega, and Mr. Thomas M. Ballentine, Secretary.



Left to right: Dr. Robert M. Engler, U.S. Army Engineer Waterways Experiment Station, Mr. Kiyoyasa Mikanagi, International Vice President, PIANC, and Mr. John H. Sargent, Chief British Delegate.



Ms. Claire DeCraen, Administrative Officer, PIANC Secretariat.

## ACTIVITIES

### Inside PIANC

- |                     |  |                 |
|---------------------|--|-----------------|
| 1-5 Sep 1996        | PIANC Conference on Inland<br>Maritime Navigation and Coastal<br>Problems of East European Countries<br>POC: Mary Jane Robertson (703) 428-6286<br>Fax: (703) 428-8171 | Gdansk, Poland  |
| 31 Aug - 4 Sep 1988 | 29th PIANC Congress<br>POC: Mary Jane Robertson (703) 428-6286<br>Fax: (703) 428-8171  | The Netherlands |
| 23-25 Sep 1996      | Permanent Environmental Commission<br>Host: U.S. Section, PIANC<br>POC: Dr. Robert Engler (601) 634-3624   | New Orleans, LA |
| 9-11 Oct 1966       | Annual Meeting, U.S. Section, PIANC<br>POC: Mary Jane Robertson (703) 428-6286<br>Fax: (703) 428-8171  | Seattle, WA     |

### Outside PIANC

- |                |   |                     |
|----------------|---|---------------------|
| 1-6 Sep 1996   | 25th International Conference<br>on Coastal Engineering<br>POC: ICCE '96 (512) 994-2376<br>FAX: (512) 994-2715  | Orlando, FL         |
| 16-20 Sep 1996 | American Association of Port<br>Authorities- Annual Meeting<br>POC: Brenda Cox (703) 684-5700   | Vancouver, BC       |
| 17-19 Sep 1996 | Tennessee-Tombigbee Development<br>Opportunities Conference<br>POC: Tennessee-Tombigbee<br>Development Authority (601) 328-0812<br>FAX: (601) 328-0363  | Orange Beach, AL    |
| 22-26 Sep 1996 | AWRA 32nd Annual Conference<br>"GIS and Water Resources"<br>POC: Robert Moresi (813) 282-0111   | Fort Lauderdale, FL |
| 25-27 Sep 1996 | National Waterway Conference<br>POC: Harry Cook (202) 296-4415  | St. Louis, MO       |
| 9-11 Oct 1996  | 22 <sup>nd</sup> National Meeting of Marina<br>Design Builders<br>POC: Prof. C. Allen Wortley,<br>Course Director (608) 262-0577<br>FAX: (608) 263-3160   | Madison, WI         |
| 13-16 Nov 1996 | Annual International Conference<br>on Urban Waterfront Issues<br>"The Dynamic Waterfront:<br>A Worldwide Urban Success Story"<br>POC: Mary Jane Robertson (703) 428-6286<br>Fax: (703) 428-8171 | Boston, MA          |
| 5-7 Dec 1996   | International WorkBoat Show<br>Ernest N. Morial Convention Center<br>POC: Lara Gordon (207) 842-5508<br>Fax: (207) 842-5509   | New Orleans, LA     |
| 20-24 May 1997 | SAME 1997 National Convention<br>Society of American Military Engineers<br>"Engineering - A Monumental Millennium"<br>POC: MAJ Dave Reynolds (703) 697-4921                                     | Washington, D.C.    |