



# THE PIANC NEWSLETTER

Permanent International Association of Navigation Congresses

Spring 1997

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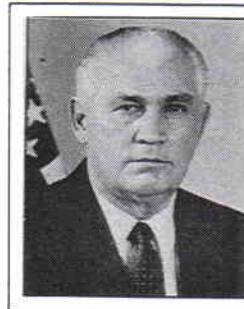
## NOTES FROM THE SECRETARY

The U.S. Section is very pleased to learn that the recipient of the 1997 Gustave Willems Prize is **Ms. Jennifer L. Irish**, Hydraulic Engineer with the Coastal Structures and Evaluation Branch of the U.S. Army Engineer Waterways Experiment Station. The title of her paper, which will be published in the July issue of the PIANC Bulletin, is *Sensitivity of Channel Sedimentation Prediction to Wave-field Characterization*. **Ms. Irish** will receive a cash prize, a five-year membership in PIANC and an expense paid trip to Venice, Italy, where she will present her paper before an international forum. Since the initial presentation of the Willems Prize in 1985, **Ms. Irish** is the fourth member of the U.S. Section to receive it. Congratulations!

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## A TRIBUTE TO BILL MURDEN

William R. Murden  
August 19, 1922 - March 15, 1997



William R. Murden

Many of us were saddened to learn that William (Bill) R. Murden died on March 15, 1997. His death signaled the end of an era. For several decades, the name Bill Murden had rung a familiar, authoritative bell for anyone affiliated with the dredging industry.

As Bill Murden rose to become the undisputed "godfather" of the U.S. Army Corps of Engineers' ever growing dredging program, his skills were recognized not only by the Corps, but by the industry and his peers. In 1979, he was elected to the National Academy of Engineering, a rare national honor. Just prior to his retirement in December 1987, he was awarded the renowned Presidential Award for Meritorious Service in recognition and appreciation of his numerous achievements during 44 years of federal service! More recently, he became a Fellow of the Society of American Military Engineers.

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The competition for the **1998 Gustave Willems Award** is now open. The international award is given for the most outstanding technical paper prepared on design, construction, improvement, maintenance, or operation of inland and maritime waterways and is open to anyone 35 years or younger. If you do not plan to enter the competition, please give the enclosed announcement to someone who may be interested in it.

On March 15, 1997, the Permanent International Association of Navigation Congresses lost a devoted and longtime member of the association and a friend to many, when **Mr. William R. Murden** passed away. An article about Mr. Murden's career will be published in the next issue of the international bulletin. A related article appears in this issue of the newsletter.

Within recent weeks, the **Permanent Technical Committees I and II, (PTC I, and PTC II)** the **Permanent Environmental Commission (PEC)** and the **Joint Commission for Sport and Pleasure Navigation (SPN)** as well as the **Executive Committee of the Permanent International Commission** have held meetings. Reports provided by the Principal Representatives of the U.S. Section of PIANC and by the Acting Vice President for the United States are summarized in the following paragraphs.

■ **Mr. Richard Dornhelm** attended the meeting of the **SPN** on February 27, 1997, in Brussels. Items of business discussed at the meeting included:

Two recent publications on **SPN** subjects are being very well received. The reports are: *Guidance on Marine Sanitation Pumpouts* (**Mr. Edward McKiernan** of SeaLand Technology, Inc., the U.S. Section Representative, served as Chairman of the Working Group) and *Review of Selected Standards for Floating Dock Designs*, which was co-authored by **Mr. Jack Nichol** (a Consulting Engineer who also serves as the Co-Principal U.S. Repre-

sentative to the **SPN**) and **Mr. Ian White** of British Waterways, United Kingdom.

Eleven national papers have been received for the session on vessel traffic conflicts at the 29th International Congress.

Concerning other working groups: *Regeneration of Harbor Areas* is proceeding nicely with analysis of individual harbor examples. The next meeting of the group will be in Seattle in the Spring. Publication is expected in 1998. The U.S. does not have a representative on *Provision of Low-Cost Moorings*; however, the Section could still consider nominating a member if an expression of interest is received. A new working group on sport and pleasure navigation and natural resource protection was discussed. The **SPN** and **PEC** are reviewing the proposed terms of reference which will be considered at the September meeting.

A study of the special dredging needs of small craft harbors was discussed. The subject will be coordinated with the **PEC**.

**Mr. Ron Stone** made a presentation on planning for the third International Marina Conference which will be held in Ft. Lauderdale, Florida, on February 15-17, 1999.

■ **Mr. Anson Eickhorst** attended the meeting of **PTC I** on February 28, 1997, in Brussels. Some of the chief issues discussed included:

Part I of Working Group 17, *Handling and Treatment of Contaminated Dredged Material from Inland Ports and Waterways*, has been published in five languages (English, French, German, Italian and Spanish). Part II will be published on a CD-ROM in English.

The report of Working Group 20, *Standardization of Dimensions of Navigation Channels*, will be published in June 1997.

A new working group: *Ice Breaking Techniques and How to Evaluate from an Economic Perspective* was accepted by **PTC I**.

Other topics for working groups that were discussed included: techniques for erosion control, water quality and habitat restoration;

hydrographic surveying and dredging techniques; and lock automation and remote control.

In the future only one or two new working group proposals per year will be accepted. This policy will require a much more selective screening process than has been employed in the past.

PTC I will present one of the working group reports, to be published around the time of the 29th International Congress, as its discussion topic at the Congress.

■ **Mr. Charles Connors** attended the meeting of **PTC II** on February 28, 1997, in Brussels. Here are some highlights of the lengthy minutes of the meeting:

Final reports were received from Working Group Number 18, *Planning of Fishing Ports*, which will be published in September 1997, and Working Group Number 30, *Dimensions of Channels and Fairways*, which will be published in January 1998. The report of Working Group Number 22, *Armoured Slopes Under Open Piled Quaywalls* will be published in July 1998.

The problem of the amount of time that elapses between the time a working group presents its final report and publication was discussed. A suggestion was made to look for sponsors outside PIANC to support publication of technical reports.

It was decided that the subject of ice and polar navigation, which was proposed by **Mr. Orson Smith** of the U.S. Section, will be organized as a fact-finding group. The group would identify state-of-the-art information and research in progress and determine the roles of the PTC II and PEC in a single working group on the subject.

■ **Mr Harry Cook**, who is filling out the remaining months of **LTG Henry Hatch's** term as an International Vice President representing the United States, attended the **Executive Committee** meeting on March 25, 1997,

in Brussels. His meeting report notes discussion of the following matters:

Mr. De Paepe called for a minute of silence in honor of **Mr. Murden**.

There are now two vacant Vice President positions. A four-year term created by the expiration of **LTG Hatch's** term and a three-year term created by the resignation of **Mr. Krause**, the representative of Germany who was elected in May 1996. Consideration is being given to candidates from Scandinavian countries and Italy.

A revised draft of the *Statutes*, which presents 15 articles in a simpler, clearer style than the previous edition, has been distributed for review. Final approval of the draft is anticipated at the 29th International Congress in September 1998.

The Spanish Section is conducting a membership drive in South America by sending 300 written solicitation letters and copies of a working group report on beneficial uses of dredged material. **Mr. Cook** presented suggestions on membership retention and recruitment and a list of suggestions for augmenting membership dues with non-dues income. He proposed that the secretaries of national sections be requested to submit the two or three most successful membership-drive formulas and that these be compiled into a paper and distributed to all national sections. Concerning non-dues income, he distributed a paper listing some 200 methods employed by U.S. Associations to generate non-dues income.

The Chairman of the Dutch Section reported on plans for the 29th International Congress and displayed the proposed logo for the meeting. The logo is an outline of The Netherlands in the center with wording in a circle around the outside perimeter reading *Navigation Congress, Den Haag*. It was suggested that *PIANC* should be added to the wording. The list of names of the Chairmen and Reporters-General for the 10 sessions of the Congress was distributed. There was discussion of the need for a declaration by the

President to be issued prior to the next Congress on the general theme of *The Role of Inland and Maritime Navigation in the Transport Chain*.

Several optional financial arrangements were presented for publication of the first part of the *technical dictionary*.

The next edition of the membership directory will include e-mail addresses. National Sections will request that members provide up-dated information.

In the fall, PIANC offices in Brussels will move into a building, which is now in the final phase of construction, located about a block from the present office.

■ **Dr. Robert Engler** attended the meeting of the PEC March 17-19, 1997, in Huelva, Spain. The four PEC working groups: *Management of Aquatic Disposal*, *Wildlife Habitat and Port Management* and *Environmental Management for Ports* are all scheduled to be published in 1998. The *Glossary of Environmental Terms* will be distributed electronically in 1997.

The Public Relations Group is drafting an action plan in conjunction with CEDA and IADA. The Group is also preparing a brochure entitled, *Dredging and Disposal - The Facts*, and guidance on use of the brochure.

Consideration was given to several topics for new working groups: justification by ports and inland waterways on the environment, environmental issues related to polar navigation, pleasure navigation and natural resource protection and environmental aspects of aquatic, nearshore, and upland confined disposal facilities for contaminated dredged material.

The *Dredged Material Management Guide*, which will present a preferred approach to manage dredged material in any disposal scenario and act as an umbrella document for all PIANC reports dealing with dredged material, will be issued in 1997. The 1996 Protocol of the London Convention was discussed. For additional information, see the

article elsewhere in this issue of the newsletter.

■ The Southern Governors' Association Task Force on Transportation has issued a report entitled, *Promoting Economic Growth and Development into the Next Century*. **Mr. Donald Waldon**, Administrator, Tennessee-Tombigee Waterway Development authority and U.S. Section Commissioner Representing the Central Region, served as a member of the Task Force on Transportation that prepared the report.

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## **BILL MURDEN** - continued from page 1

But Bill's life wasn't all about dredging. He was much beloved as a caring and compassionate human being, and he was greatly admired by his colleagues and co-workers. That is what really made him truly successful.

Bill Murden's devotion to his work was only matched by his devotion to his wife, Dottie. Dottie was Bill's best friend, his partner and mentor in life, in work and in play for almost 50 years. She was as familiar with his projects, his problems, and his successes as any of his fellow workers. They worked and traveled together, forging a perfect team that many would have liked to imitate. In talking to Bill Murden, you knew that invariably he would mention Dottie's name.

In the same way, most people in the dredging business would find it difficult to discuss dredging and not mention Bill Murden's name. The son of a Corps dredge captain, he learned at an early age to identify equally well with the captains who made the decisions on the water and the mechanics who kept the dredges running. Born on August 19, 1922, in Beaufort, North Carolina, Bill served as a bomber command pilot in the U.S. Army Air Corps during World War II. After working as an engineer with the Norfolk District of the Corps of Engineers in the hydro-electric and dredging divisions, Bill joined the Corps Headquarters in Washington, D.C., in 1956, where he served for 30 years. Along the way,

he found time to complete his degree in Mechanical Engineering from Elizabethtown College in Pennsylvania and later, a Master of Business Administration from Heed University.

In the 1960s, Bill was heavily involved in the maintenance of the Panama Canal, particularly dredging during emergency situations. He was also in charge of U.S. dredging operations in Vietnam during the conflict. He demonstrated such exceptional leadership, intelligence, tact and imagination that in 1979, the Chief of Engineers, LTG John Morris, appointed him Chief of the Dredging Division of the U.S. Army Corps of Engineers, a component of the Directorate of Civil Works. As Dredging Chief and a member of the Senior Executive Service, Bill was responsible for the entire dredging program of the U.S. Army Corps of Engineers, to include the planning, budgeting, design and construction of Corps dredges and other major floating and land plant operated in conjunction with the Civil Works program.

No biography about Bill Murden would be complete without mentioning his role in establishing working relationships related to dredging and the use of dredged material with the Dutch, French, and Japanese governments. Dottie was especially helpful as Bill worked tirelessly to bring together dredging experts to discuss proven and innovative concepts. As a result, each country has benefited from shared dredging technology and techniques and will continue to do so in the future.

Convinced that there were significant, untapped benefits to using dredged material, Bill encouraged and supported this concept not only in the Corps, but with PIANC, the National Research Council, the American Society of Mechanical Engineers, the National Waterways Association, and the Western and Eastern Dredging Associations as well as throughout the world. He lived to see beneficial uses of dredged material, such as wildlife nesting islands, beach nourishment, wetlands

restoration, and shoreline protection, become routine practices.

In PIANC, Bill saw the key to shared technology with the world. Over the years, he remained very active in PIANC, serving as Chairman of the Finance Committee and putting PIANC on a firm financial footing, planning national conferences, and becoming a Commissioner Emeritus and an Honorary International Member in 1990.

After he retired from government service, Bill became the president of Murden Marine, Ltd., a successful marine engineering consulting firm he founded and operated with Dottie. As a private citizen, he continued to stay involved in dredged material workshops until his death.

Once Bill Murden made a friend, the relationship lasted a lifetime. His old friend from The Netherlands, Augie Hoekstra, came a long way to say good-bye to Bill, as did three retired U.S. generals— LTG John Morris and LTG E.R. Heiberg III, both former Chiefs of Engineers, and LTG John Wall, former Director of Civil Works, now Father Wall and the Episcopal priest who conducted the funeral service. Also present were Robert Dawson, former Assistant Secretary of the Army for Civil Works, and Morgan Rees, former Deputy Assistant Secretary of the Army. Amid a sea of colleagues, family and flowers, they paid tribute to this amazing man they all called "friend."

Bill Murden is survived by his beloved wife, Dorothy (Dottie) Gibson Murden.

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## **CHIEF OF ENGINEERS REPORTS ON DIVISION RESTRUCTURING**

Corps of Engineers Chief, Lieutenant General Joe Ballard, called Corps headquarters employees together several weeks ago for a second Town Hall meeting. It was held, as he promised, at the six-month mark of his service as Chief of Engineers.

The Chief announced the "end state" envisioned for Division Restructuring within the Corps of Engineers. "The new structure of the Corps will ensure continued customer service," said LTG Ballard. "It also ensures that the management of the major watershed basins stays under a single division headquarters."

The final map of the Corps will show eight divisions: North Atlantic, South Atlantic, Great Lakes and Ohio River, Mississippi Valley, Southwest, Northwest, South Pacific, Pacific Ocean. Each division will be commanded by a General officer and will include at least four districts. (See page 19 for map)

The major components of the new structure involve realigning the staffs of four current division offices into two divisions, each under the control of a single commander. The headquarters of the North Central and Ohio River Divisions are combined to form the new Great Lakes and Ohio River Division, with headquarters located in Chicago and Cincinnati. The North Pacific and Missouri River Divisions are combined to form the new Northwestern Division, with headquarters located in Portland and Omaha. A headquarters office is at all four locations to better coordinate and address regional issues.

Additionally, the New England Division is converted to the New England District and will report to the North Atlantic Division Commander in New York City.

A number of districts will report to different offices. St. Paul and Rock Island Districts now report to the new Mississippi Valley Division. Alaska District now reports to the Pacific Ocean Division, based in Honolulu. The Albuquerque District now reports to the South Pacific Division in San Francisco.

The restructuring is in response to Public Law 104-206, Energy and Water Development Appropriations Act, 1997, which directs the Corps of Engineers to reduce the number of its divisions.

"The new structure does more than just meet the requirement to reduce the number of divisions," said LTG Ballard. "It optimizes support to military forces, minimizes district realignments and maintains geographical balance."

The restructuring will not include any changes to Military Programs at the districts.

For now, no further changes are contemplated.

"I am going to place a hold on all restructuring efforts for one year," LTG Ballard said. "You have been reorganizing and planning for too long. We need to pause, catch our breath, and absorb what has happened before we make more big changes. It's time to stop shuffling the decks long enough to know where we are going."

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## **1996 PROTOCOL REPLACES LONDON CONVENTION**

The London Convention meets two to three times a year and agrees on criteria, standards, prohibitions, allowances, and management protocols. These protocols 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 London Convention (Consultative, Scientific

Group, and *ad hoc* Special Experts) meetings are considered binding by the member nations and implemented through the Marine Protections Research and Sanctuaries Act (Ocean Dumping Act).

The October 1996 meeting of the London Convention was a special Conference scheduled to develop the 1996 Protocol to replace the London Convention.

Five years in the making, the revisions of the special Conference are generally more stringent on ocean disposal and polluting activities. The Protocol incorporates many new principles of environmental protection and waste management and bans ocean disposal of all wastes and other materials with a few exceptions (the *Reverse List*). The agreements reached at the special Conference will have far-reaching effects into the future of waste management in ocean waters.

The existing London Convention consists of Articles describing its philosophy, policy, and legal aspects. It also has three mandatory Annexes:

Annex 1 - substances and materials prohibited from disposal.

Annex 2 - substances disposed only with special care.

Annex 3 - provisions for establishing member nations domestic regulations.

Over time, numerous technical guidelines have been adopted to define terms and set forth assessment protocols reflecting the latest technology.

Protocol 1996 has Articles as above with two Annexes. Annex 1 will be a list of materials socially acceptable for potential ocean disposal (the *Reverse List*). Annex 2 is the Waste Assessment Framework (WAF) that technically implements the London Convention by determining suitability for disposal of the *Reverse List* (Annex 1) materials.

There will also be guidelines for implementing the Convention. The first guideline that has been adopted is the Dredged Material Assessment Framework that was initiated by

PIANC. Additional guidelines will be developed for other materials on the *Reverse List*. The Protocol must be approved by a minimum of 28 countries to come into force.

The Protocol encourages application of a *precautionary approach* to environmental protection. This means taking preventative measures when there is reason to believe that wastes and other matter introduced into the marine environment may cause harm "even when there is no conclusive evidence to prove a causal relation between inputs and their effects."

The Protocol of 1996 prohibits the ocean dumping of wastes or other matter except for dredged material and a few others. Disposal is guided by the "Precautionary Approach." The Waste Assessment Framework is implemented through guidelines for each material and allows management of otherwise unsuitable material, emphasizing source control and beneficial uses. The U.S. Army Corps of Engineers, PIANC, and the International Association of Ports and Harbors were influential in the outcome of these important revisions.

For more information about the London Convention, please contact Bob Engler, (601) 634-3624.

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## **P.O.R.T.S. METERING SYSTEM IMPROVES NAVIGATIONAL SAFETY IN Galveston BAY**

Texas decision-makers have a new intelligence-gathering ally in the effort to quickly assess and contain oil spills in the Galveston Bay system.

The new high-tech metering system's data on current speeds and directions and water levels are already helping barges and vessels to navigate more safely in Galveston Bay waters. But if a spill does occur, that same

real-time data can be key to efficiently mobilizing containment and cleanup efforts.

Other data from the Physical Oceanographic Real Time System (P.O.R.T.S), like water temperatures, salinity levels and other ecological parameters, have far-reaching uses for scientists, natural resource managers and environmentalists. Galveston Bay is the first location in the country to use this extensive monitoring system. Several other bays have similar smaller systems.

"Other coastal areas around the country are really watching us to see how this works out," according to Captain Stephen Ford, Department of Marine Transportation at Texas A&M University at Galveston (TAMUG).

During an oil spill, data supplied by P.O.R.T.S. is plugged into oil-spill simulators, which then predicts what the spill will do.

"The resulting information lets everyone know where to put their people to clean up the spill," Ford said.

P.O.R.T.S. played a major role in fighting the 5,000-barrel oil spill that occurred near Bolivar Peninsula in March. High winds and heavy currents made containing the spill very difficult, but the monitoring data helped determine landfall and guide cleanup crews.

P.O.R.T.S. consists of three Doppler metering devices, one placed in each of the three places in the bay— off Morgan's Point near the mouth of San Jacinta River, off Eagle Point near San Leon, and off the Bolivar Peninsula. The collected data are transmitted to the university. The information can be accessed by telephone or by on-line-computer.

Taking advantage of this new resource are:

- o Participants in sailboats regattas.
- o Fisherman requiring accurate information about tides.
- o Scientists involved in oyster research.
- o Mosquito Coast District officials making decisions about needed chemical quantities.

- o Regulators determining origin of pollution impacting a fishery.

- o Scientists determining how factors like water temperature, salinity and current speeds figure into a fish kill.

As of now, emerging statistics seem to indicate that P.O.R.T.S. is already improving safety for maritime traffic, especially in some key areas, like Bolivar Roads—where the Houston Ship Channel, the Intercostal Waterway and the Texas City Ship Channel intersect. The area is difficult to navigate since currents sometimes reach speeds of 4 knots, and vessels often have to negotiate difficult turns from one waterway to the other.

The Houston Galveston Navigation Safety Advisory Committee prompted Congressional support of the P.O.R.T.S. concept. Congress authorized \$750,000 of NOAA funding for the project. That price included the equipment, installation and one year's local support to continue monitoring the program.

The investment seems to be paying off for navigators. Ford said he knows of instances where captains have called for real-time data and waited for currents to subside before proceeding through the Bolivar Road area.

Only two groundings have occurred there in the last couple of months. Previously, an average of four to five groundings per month occurred. Ford and the navigational community are waiting to see if the improvement continues over a significant period of time. Fewer groundings could mean fewer spills and greater navigational safety. That's something that would benefit all Galveston Bay users.

(Excerpted from an article in May-June 1996 **Gulfwatch**.)