



The Navigation eNews is changing format. The newsletter will be released every 2 months. Articles will be short, with a point of contact for folks who want more information. We aim to make this an easily perused, useful newsletter. Please send us a paragraph or two when you've something to share with the navigation community – email: dinah.n.mccomas@usace.army.mil.

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USACE Support to IOOS

The goal of the Integrated Ocean Observing System (IOOS) is to provide continuous data regarding open oceans, coastal waters, and the Great Lakes in formats, rates, and scales required by scientists, managers, businesses, governments, and the public to support research and informed decision-making, <http://ioos.noaa.gov>. IOOS has the full support of the US Army Corps of Engineers to the highest level.

IOOS is a national partnership of 17 Federal agencies, with the National Oceanic and Atmospheric Administration (NOAA) being designated by Congress as the lead Federal agency for IOOS. The Federal agencies constituting IOOS include: Arctic Research Commission; Army Corps of Engineers (USACE); Coast Guard; Department of Agriculture; Department of Defense Joint Chiefs of Staff; Department of Energy; Department of State; Department of Transportation; Environmental Protection Agency; Food and Drug Administration; Geological Survey; Marine Mammal Commission; Minerals Management Service; National Aeronautics and Space Administration; National Science Foundation; and Office of Naval Research.

Each of the 17 sponsoring Federal agencies is a member of the Interagency Working Group on Ocean Observations (IWGOO) chaired by NOAA and vice-chaired by ONR, NSF, and NASA, <http://www.ocean.us/IWGOO/>. The IWGOO will serve as the lead coordinating group to oversee coordination of IOOS with other major ocean initiatives nationally and internationally, such as the NSF Ocean Observatories Initiative (OOI), the Census of Marine Life Ocean Bio-geographic Information System (OBIS), the National Water Quality Monitoring Network, and the Interagency Working Group on Ocean and

Coastal Mapping Program. The IWGOO will continue to coordinate with the Regional Associations through the National Federation of Regional Associations (NFRA).

Ocean observations are collected at global, national, regional, and local scales. IOOS is a major shift in our approach to ocean observing, drawing together many networks of disparate Federal and non-Federal observing systems to produce data, information, and products at scales needed to support decision-making. IOOS is a nationally important infrastructure enabling many different users to monitor and predict changes in coastal and ocean environments and ecosystems. This infrastructure is critical to understand, respond, and adapt to the effects of severe weather, global-to-regional climate variability, and natural hazards.

The Corps currently has the following representatives working on IOOS:

Interagency Working Group on Ocean Observations
William Birkemeier – ERDC; Member

AOOS – Alaska Ocean Observing System
Patricia Opheen – Alaska District; Member
Bruce Sexauer – Alaska District; Member
Ken Eisses – Alaska District; Member

NANOOS – Northwest Association of Networked Ocean Observing System
Bernie Hargrave – Seattle District; Member
Doris McKillip – Portland District; Member
Rod Moritz – Portland District; Member
David Michalsen – Portland District; Member

CeNCOOS – Central and Northern California Ocean Observing System
George Domurat – South Pacific Division; Member
Peter Mull – San Francisco District; Member

SCCOOS – Southern California Coastal Ocean Observing System
Art Shak – Los Angeles District; Member, Senior Advisory Committee

PacIOOS – Pacific Islands Ocean Observing System
Tom Smith – Honolulu District; Member
Jessica Podoski – Honolulu District; Member

GCOOS – Gulf of Mexico Coastal Ocean Observing System
Jennifer Colee – Mobile District; Member
Jay Ratcliff – New Orleans District; Member
Matthew Schrader – Jacksonville District; Member
Jason Engle – Jacksonville District; Member
Jennifer Wozencraft – ERDC/ Mobile District; Steering Committee

SECOORA – Southeast Coastal Ocean Observing Regional Association
William Birkemeier – ERDC; Member
Jeffrey Hanson – ERDC; Member

MACOORA – Mid-Atlantic Coastal Ocean Observing System
Jeffrey Hanson – ERDC; Member
Roy Messaros – New York District; Member

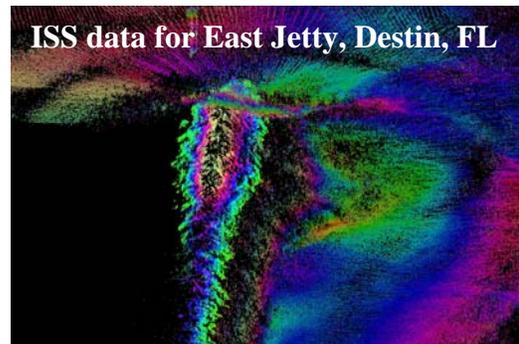
NERACOOS – Northeast Regional Association of Coastal Ocean Observing Systems
William Hubbard – New England District; Member
John Winkelman – New England District; Member, Steering Committee
GLOS – Great Lakes Observing System
Scott Thieme – Detroit District; Member
James Selegean – Detroit District; Member
Interagency Working Group on Ocean and Coastal Mapping
Eddie Wiggins – Mobile District; Member
Jennifer Wozencraft – ERDC/ Mobile District; Member
Jeff Lillycrop – ERDC; Co-Chair

For more information: lyndell.z.hales@usace.army.mil.

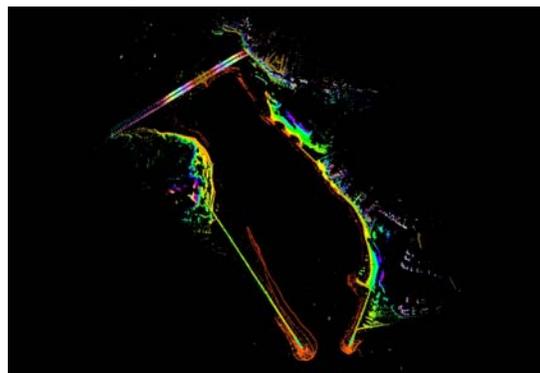
Coastal Structures Assessments – The Complete Picture

Stanley Boc and Cheryl Pollock

A complete package that meets the Corps' need to assess and document the condition of rubble mound structures is the result of a Navigations Systems Research Program workunit under the guidance of Stanley Boc and Cheryl Pollock at the Coastal and Hydraulics Laboratory. This package contains 4 'tools.' The first tool is a standardized format for field inspections and condition reporting. The second tool utilizes the technology of hand-held tablet computers to automate the collection, processing and storing of structure inspection data, thus making inspecting and reporting an automated in-field operation. The computers are outfitted with a camera, a distance measuring device, an altimeter and GPS capability. The hand-held computers also contain the standard structure condition form to aid in simplifying data entry needs and to produce the inspection results in a digitized format, allowing ready comparison to future surveys and inspections. Additionally, the hand-held device allows users to calculate the GPS location of a remote point and to delineate an

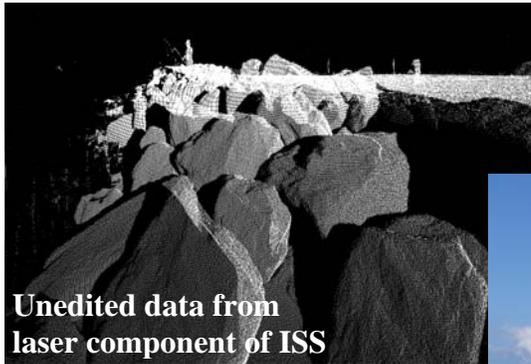


Test site – Fort Walton/Destin, Florida



Unedited data from ISS for same test site.

area of damage without entering that area. The third component of the package is the Integrated Survey System (ISS), a tool to simultaneously gather the above- and below-water structure geometry in a geo-referenced format. The ISS can complete a survey of a harbor area in a fraction of the time presently required and produces a point cloud dense enough that individual armor units can be viewed. This system should have multiple applications, including surveying most types of navigation and flood protection



structures, beach mapping, and real-time construction monitoring. Cross sections derived from this data set could be used in the development of required repair construction documents. The fourth tool, the Coastal Structures Condition Assessment and Standardized Reporting application (CoSCA), brings it all together. CoSCA is an interactive GIS tool for data management, project assessment and standardized reporting methods for structures. It provides an easy way to compare historic and future structure surveys and to evaluate the changes in the structure condition. It can also provide repair quantities and costs for project reports.

This new package to assess and document the condition of rubble mound structures allows data to be gathered, integrated, and managed for comparisons and change assessments in a standardized approach. For more information email: Stan Boc, Stanley.J.Boc@usace.army.mil, or Cheryl Pollock, Cheryl.E.Pollock@usace.army.mil.

Upcoming Navigation RARG Meeting

The Navigation Research Area Review Group (RARG) meeting will be held on 7-9 April at the USACE New York District office in New York City. The RARG is the group tasked with prioritizing research and development (R&D) field-identified research requirements. These requirements are called Statements Of Need (SONs). SONs can be submitted for consideration whenever engineers and scientists throughout the Corps of Engineers see a need in their technical disciplines and mission areas. For Navigation research, they are to be submitted online through the Navigation Gateway, <http://operations.usace.army.mil/navigation.cfm> .

The USACE Research and Development Directorate (CERD) recently developed this Civil Works R&D process. Field-identified research requirements are prioritized by the RARGs, which are composed of a representative membership of field and MSC experts. The prioritized requirements are then routed through HQ for overall prioritization. Then CERD develops a Civil Works R&D program to achieve those higher priority requirements. For more information on Navigation SONs or the upcoming RARG, contact Dinah McComas, dinah.n.mccomas@usace.army.mil, 601-634-2157.

Published - Technical Guidelines for Environmental Dredging of Contaminated Sediments, ERDC/EL TR-08-29

ERDC-EL is pleased to announce the availability of a new document containing technical guidelines for evaluating environmental dredging as a sediment remedy component. This document is applicable to contaminated sediment sites evaluated under various environmental laws and regulatory programs. The intended audience for this report includes all stakeholders potentially involved in evaluating environmental dredging for purposes of a feasibility study, remedial design, or implementation. The document is also expected to be a valuable resource to those whose principal responsibility is construction and maintenance of navigation channels, where the finding of contaminated sediments may impact all aspects of the project. Until now, detailed information for planning, selecting equipment, designing operational strategies, and predicting effectiveness of environmental dredging has been largely site specific, and no comprehensive technical guidelines existed. This report is intended to fill that gap. The document can be accessed and downloaded from: <http://el.erdcl.usace.army.mil/elpubs/pdf/trel08-29.pdf>.

10th Annual JALBTCX Airborne Coastal Mapping and Charting Workshop, 16-17 June 2009, Portland, OR

The Joint Airborne Lidar Bathymetry Technical Center of Expertise (JALBTCX) will host its 10th Annual Airborne Coastal Mapping and Charting Workshop at the Hilton Portland & Executive Tower in Portland, OR, on 16-17 June 2009, POC Jennifer Wozencraft, jennifer.m.wozencraft@usace.army.mil. To mark the occasion, and the success of lidar bathymetry and airborne coastal mapping and charting, we are beginning a series of annual awards to recognize individual and organizational accomplishments. The goal is to recognize those who are making notable contributions to our science and practice. Nominations are open worldwide to all and not limited to North America and the JALBTCX program. A selection committee comprised of representatives from around the world will make final selections. Nominations should be sent with a brief summary to Jeff Lillycrop (jeff.lillycrop@usace.army.mil) by March 31 each year and winners will be announced at the annual JALBTCX workshop and in trade magazines. The workshop is open to all. New is the awards dinner, with keynote speaker, at which the award winners will be announced.

Four awards will recognize individuals and organizations engaged in coastal mapping and charting:



1. The 532 Award: a significant cumulative achievements award. The recipient will have a history in lidar bathymetry and airborne coastal mapping and charting, contributing to the advancement of the technologies, market, and/or worldwide area surveyed using this capability. No single event or achievement will justify this award, but rather a number over a period of years. This should be awarded to the most accomplished and critical person on earth (or beyond) in the field of lidar bathymetry and airborne coastal mapping and charting.

2. The Sebastian Sizgoric Technical Achievement Award: exemplifying Sebastian's creativeness and passion for lidar. The recipient will have made a major contribution in the field of lidar bathymetry and airborne coastal mapping and charting within the past 2 years. Results must be validated by the community and be undisputed. This may be in the form of a peer reviewed journal paper, delivery and acceptance of a new system, or product, or tool to a customer, or addition of new capability to airborne coastal mapping and charting.

3. The LCDR Peter Johnson Best Practices Award: exemplifying Peter's dedication, professionalism, initiative, and high level of commitment and performance. The recipient will have accomplished a complicated, demanding airborne lidar survey within the past 2 years. Through this project or field operations a clearly defined challenge will have been overcome leading to a notable success or advancement in best practices. The accomplishment will be undisputed by the community.

4. The Lidar Lights and Mirrors Award: or in other words, the "oops, I wish I hadn't done that" faux pas award. During the course of scientific discovery defining moments and actions are often remembered forever, achievements or events that mark an epiphany or enlightening moment that significantly alter our world – small steps for man, but giant leaps for mankind. This award is NOT that award. Rather, there are always faux pas and slipups that bring light heartedness to challenging situations. This IS that award. The award will be presented in a positive spirit for a lighthearted instance so we can chuckle with the recipient.

A block of rooms is currently being held at the Hilton Portland & Executive Tower (http://www1.hilton.com/en_US/hi/hotel/PDXPHHH-Hilton-Portland-Executive-Tower-Oregon/index.do) for the evenings of June 15, 16, and 17th under the name "Joint Lidar Center" until Friday, May 16. Contact the hotel at 1-503-226-1611 to make reservations. If you plan to attend the awards banquet, email Jill Dittmann, jdittmann@3001inc.com.

Corps involved in moving the USS Intrepid for renovations

JoAnne Castagna, Ed.D.

The USS Intrepid is one of the most distinguished war ships in naval history. It began service during World War II and was decommissioned in 1982. Since then she has served as the Intrepid Sea, Air & Space Museum. In 2006, after deciding to have the ship renovated and to rebuild Pier 86 where the ship is berthed, the museum received a federal permit from the U.S. Army Corps of Engineers New York District to dredge an access channel from the berthing area to the main federal channel of the Hudson River to facilitate moving the Intrepid for renovation.

Dredging the river mud that had accumulated around the ship was completed that fall.

Soon after the ship was given an elaborate send-off to its temporary home. Several public service agencies' vessels were invited to escort the ship down river. Four Army Corps workboats led the flotilla.

Seven tugboats began to pull the engineless ship. The 27,100-ton ship was moved stern first. After about 15 feet, its four giant propellers, each 16 feet in diameter, dug into the river bottom, preventing further movement. This short-lived move attempt resulted in a compacted "speed bump" of river mud under the ship's fantail.



The Intrepid being guided back home by U.S. Army Corps of Engineers vessels.
Credit: Dan Desmet, Public Affairs, U.S. Army Corps of Engineers, New York District.

A multi-agency team of the Intrepid Foundation, state and city agencies, the U.S. Army Corps of Engineers New York District and the U.S. Navy's Naval Sea Systems Command quickly executed a unique and highly visible dredging operation to free the ship. In December 2006 the 63-year-old ship was escorted gracefully down river by Army Corps harbor workboats, New York City police boats and fireboats.

Then, on a cool, gusty October 2008 day, the aircraft carrier made its way home, led by the U.S. Coast Guard and Army Corps harbor workboats, and the same McAllister tugboats that freed it two years ago.

Prior to the return trip, U.S. Army divers training at the U.S. Army Corps of Engineers Caven Point Marine Terminal in New Jersey assisted in surveying the ship's path for any obstructions that would block her way home. Colonel Nello Tortora, Commander of the U.S. Army Corps of Engineers New York District, added that the Corps had Navy contractors clear the space alongside the pier. The Intrepid Sea, Air & Space Museum officially re-opened to the public on 8 November 2008. For more on the museum, visit www.intrepidmuseum.org.

Dr. JoAnne Castagna is a technical writer-editor for the U.S. Army Corps of Engineers, New York District. She can be reached at joanne.castagna@usace.army.mil

Conferences, etc

Email Dinah.N.McComas@usace.army.mil if you know of a meeting that would be of interest to our readers.

3-5 March 2009. Inland Waterways Navigational Conference. Nashville, TN.

<http://www.inlandwaterwaysconference.com/>

19-21 May 2009. National Dredging Meeting. Details to follow.

14-17 June 2009. WEDA 29 and TAMU 40. Tempe, AZ.

<http://www.inlandwaterwaysconference.com/>

16-17 June 2009. JALBTCX Workshop and Awards. Portland, OR. See article above.

6-9 September 2009. Smart Rivers. Vienna, Austria.

http://gulliver.trb.org/news/blurbs_detail.asp?id=10031

Call for Papers – 2010 De Paepe-Willems Award Contest International Navigation Association (PIANC)

The De Paepe-Willems Award is given by PIANC for the most outstanding technical paper prepared on an aspect of waterborne transport, with emphasis on original and practical application of technology (state-of-practice). Categories include policy, planning, management, engineering, design, environment, economics, integration with other transportation modes, technology, safety, and public involvement. The competition is open to anyone not having reached the age of forty (40) on December 31, 2009. The international winner in 2010 receives a trip to the 2010 Annual General Assembly in Liverpool, England. The International award winner receives €5000 and a five-year individual membership.

The deadline for submitting paper abstracts for the 2010 contest is **May 1, 2009**, with technical paper submittals required by **August 1, 2009**. Please visit the PIANC USA website for a complete listing of available awards and scholarships (<http://www.pianc.iwr.usace.army.mil/>), and the International PIANC website for information on qualifying for and preparing DePaepe-Willems papers for competition (<http://www.pianc.org/>). For more details contact Edmond Russo, Chair, Publications Committee, PIANC USA, at Email edmond.j.russo@usace.army.mil, (601) 634-2067.