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**New Webinar**

Continuing Education  
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## Navigation Engineering: Understanding the Basics of This Growing Specialty

Sponsored by ASCE Continuing Education and ASCE's Oceans, Ports, and Rivers Institute (COPRI)

**WEDNESDAY, January 20, 2010**  
**12 Noon - 1 pm Eastern Time**

### PURPOSE AND BACKGROUND

Navigation engineering is a new civil engineering specialty that involves the life-cycle planning, design, construction, operation, and maintenance of safe, secure, reliable, efficient, and environmentally sustainable navigable waterways (channels, structures, and support systems) used to move people and goods by waterborne vessels. It includes many existing engineering fields related to waterways and combines them into one specific discipline that supports the United States Marine Transportation System (MTS).

The importance of the Marine Transportation System cannot be overstated. Despite growth in communications and high speed transportation, the nation's ports and waterways remain the critical backbone of our economy and national defense. Considering that in the United States:

- Waterborne transport moves more than 95% of imports and exports – oil, grain, autos, coal, and many other goods
- 134 million passengers are moved each year via navigable waterways
- Waterways support a \$100 billion commercial and recreational fishing industry
- Rapid deployment of Navy and Coast Guard ships is essential for both national defense and shipment of materials in peacetime
- One gallon of fuel moves a ton 514 miles by barge compared to 202 miles by rail and 59 miles by truck

This seminar presents the basics of the specialty area of navigation engineering – what it is, who's doing it, and where its information resources are available.

### LEARNING OBJECTIVES

Participants will:

- Understand the basics of navigation engineering
- Learn about the Marine Transportation System (MTS)
- Understand the roles of Corps of Engineers, Coast Guard, and The National Oceanic & Atmospheric Administration (NOAA) in supporting the MTS through navigation engineering
- Learn how to get started in locating and using standard criteria for design, construction, and maintenance of navigation facilities
- Find out where to get additional information and education in navigation engineering
- Be introduced to the new ACSE Manual 116, *Navigation Engineering Practice and Ethical Standards*

### SEMINAR BENEFITS

- Learn the basics of the growing new specialty of navigation engineering and what it means for your job
- Learn how your business or agency can benefit from the U.S. Marine Transportation System
- Understand the navigation engineering roles of the Corps of Engineers, Coast Guard, and NOAA
- Identify opportunities for navigation engineering services and position yourself for jobs in this growing specialty
- Help clients understand the need for professional navigation engineering services
- Earn one Professional Development Hour (1 PDH)

### INTENDED AUDIENCE

The seminar will be useful to those who work in the private sector, beginning engineers in the Corps of Engineers and other government agencies involved with navigation engineering, and also to those who advise these organizations such as attorneys. The discussion, though technical, involves no equations. Non-engineers can follow the material.

### SEMINAR OUTLINE

- What is the Marine Transportation System?
- What is navigation engineering?
- How do channels, locks, and ports function?
- What do federal agencies and consulting firms do in navigation engineering?
- Who practices navigation engineering?
- What standard criteria should I use?
- How can I build my expertise?

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**ASCE**  
American Society of Civil Engineers

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**REGISTRATION FEES\*****NAVIGATION ENGINEERING: UNDERSTANDING THE BASICS OF THIS GROWING SPECIALTY**

WEDNESDAY, January 20, 2010 / 12 Noon – 1 pm Eastern Time

- \$249 Member    \$299 Non-Member

**Information/Registration:****SEMINAR INSTRUCTOR**

**William H. McAnally, Ph.D., P.E., F.ASCE**, is a research professor of civil and environmental engineering at Mississippi State University. He previously served as Technical Director, Navigation, at the U.S. Army Corps of Engineers Waterways Experiment Station. During his 40 year engineering career he has investigated a multitude of navigation engineering projects and taught numerous courses. He edited the new ASCE Manual 116, *Navigation Engineering Practice and Ethical Standards* and has authored over 100 technical papers and reports. McAnally is a member of the COPRI Waterways and Navigation Engineering committees and is a member of the World Association for Waterborne Transport Infrastructure (PIANC), where he recently served on the working group that produced PIANC Report 102, *Minimizing Siltation in Harbors*.

**BENEFITS OF LIVE TELEPHONE/WEB SEMINARS**

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Created in 2000, the Coasts, Oceans, Ports, and Rivers Institute (COPRI) is a semi-autonomous institute of the American Society of Civil Engineers (ASCE), the country's oldest national engineering society. COPRI's services are designed to complement ASCE's traditional civil engineering base, and to attract new categories of members (non-civil engineer allied professionals) who seek to enhance their professional and technical development.

**SYSTEM REQUIREMENTS FOR PARTICIPANTS**

As a participant using the Meeting Center, your computer must meet the following requirements:

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\*Safari on Windows is not supported

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**CEU'S/PDH'S**

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