

Channel Design Breakout Session 2

Moderator: Dr. Jennifer Waters

Scribe: Mr. Kenneth Lichtman

- ❖ Different interoperability issues between agencies
 - USCG, USACE, NOAA
 - Lack of compatibility between databases and information systems
- ❖ Definition of channel toe, slope intercept
 - (ATON considerations)
 - Need side slope intercept info
- ❖ Access to real-time information on tides, wind, waves
 - PORTS data
 - Speed and elevation of water in channels are changing as channels are getting deeper and wider
- ❖ Incorporate changes in physical conditions of estuaries as a result of channel improvements
- ❖ Incorporation of probability and risk into channel design
- ❖ Refinement of channel design to reduce quantity of material to remove and cost of project (e.g. Baltimore)
- ❖ Probabilistic vs. deterministic channel design
- ❖ How is risk defined?
- ❖ Accessibility, reliability of channel
- ❖ Increase safety
- ❖ Economics of channel improvements
 - Pilots-role in process?
 - Intertanko study – fragmented process for navigation improvements

- Linkages between agencies
 - USACE – construct
 - USCG-ATON
 - NOAA-charting
 - Involvement of multiple agencies

- ❖ Segmentation of project into Federal project and non-Federal berths

- ❖ Length of process from planning to construction
 - Can it be shortened, changes?

- ❖ Changing physical characteristics of cruise ships

- ❖ Federal funding of channel improvements

- ❖ Consideration of maneuverability of vessels in channel design process

- ❖ Narrowing of projects to reduce costs
 - Depth is for productivity, width is for safety

- ❖ Volume of traffic thru channel

- ❖ Hub-feeder port concept

- ❖ Change in size of containerships

- ❖ Operational characteristics of vessels (containerships operate differently than tankers of same draft)

- ❖ Use of vessel traffic control systems

- ❖ Other vessels in channel (recreational vessels, ferries)

- ❖ Have shallow draft channel alongside deep-draft channel to separate large & small vessels (safety separation zones)

- ❖ Moving safety zones (used in Chesapeake bay w/ LNG tankers)

- ❖ Integration of operational factors in design process (i.e. speed)

- ❖ Operational characteristics of design factors
- ❖ Incorporating environmental aspects into channel design
 - (e.g. wetlands, creation, mitigation)
- ❖ Increased coordination between agencies
 - (environmental, regulatory, construction)
- ❖ Public awareness and education of role of shipping industry