Nautical Depth for U.S. Navigable Waterways: A Review

W. H. McAnally, R. Kirby, S. H. Hodge, T. L. Welp, N. Greiser, P. Shrestha, D. McGowan, P. Turnipseed, and (Navigation Engineering Subcommittee, Waterways Committee, Coasts, Oceans, Ports, and Rivers Institute)

J. Waterway, Port, Coastal, Ocean Eng. 142(2), 04015014 (2016);

http://dx.doi.org/10.1061/(ASCE)WW.1943-5460.0000301

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I. Leifer, T. A. McClimans, S. H. Gjøsund, and E. Grimaldo

J. Waterway, Port, Coastal, Ocean Eng. 142(2), 04015015 (2016);

http://dx.doi.org/10.1061/(ASCE)WW.1943-5460.0000292

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Longshore Transport Estimation on Ofir Beach in Northwest Portugal: Sand-Tracer Experiment

Sandra Fernández-Fernández, Paulo Baptista, Virgínia A. Martins, Paulo A. Silva, Tiago Abreu, Joaquim Pais-Barbosa, Cristina Bernardes, Paulo Miranda, Mariana V. L. Rocha, Fábio Santos, Ana Bernabeu, and Daniel Rey

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Probability Analysis of Wave Run-Ups and Air Gap Response of a Deepwater Semisubmersible Platform Using LH-Moments Estimation Method

Longfei Xiao, Haining Lu, Xin Li, and Longbin Tao, M.ASCE

J. Waterway, Port, Coastal, Ocean Eng. 142(2), 04015019 (2016);

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Online Publication Date: 14 Dec 2015 Abstract | Full Text HTML | References |

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Effects of Vertical Variation in Vegetation Density on Wave Attenuation

Wei-Cheng Wu and Daniel T. Cox

J. Waterway, Port, Coastal, Ocean Eng. 142(2), 04015020 (2016);

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Using an Oscillating Water Column Structure to Reduce Wave Reflection from a Vertical Wall Fang He and Zhenhua Huang

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CASE STUDIES

TOP 1

Near-Channel Velocities in the Presence of a Dredge-Spoil Island David A. Christiansen and Ben R. Hodges

J. Waterway, Port, Coastal, Ocean Eng. 142(2), 05015002 (2016);

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- A vessel-mounted acoustic Doppler current profiler study focusing on channel-scale flow patterns in Galveston Bay near the Houston Shipping Channel and the artificial (dredge spoil) Mid-Bay Island is described. Winds of 5–7 m/s at 215–230° from N were present during data collection, which was conducted both in the deep channel (15 m) and along the shallow (3 m) open water near the channel. For both peak ebb and flood conditions, the tidal circulation forces flow in a direction opposing the wind, which appears to be due to a large-scale flow divergence forced by Mid-Bay Island. The strongest wind-opposing currents were measured closest to the island. During peak flood flow, the shape of the along-channel velocity profile for the open water upwind of the channel at Mid-Bay Island indicated uniform flow, and the salinity profile indicated a well-mixed water column. The near-island along-channel velocity profile showed a near-linear trend and the salinity profile indicated a stratified water column, suggesting that stratification affects the velocity despite the shallowness of the open water adjacent to the ship channel. During peak ebb flow, the near-island along-channel velocities were highly variable, and salinity profiles collected in both the open water and near-island showed stratification. During flood flows, Mid-Bay Island is the first of a chain of dredge-spoil islands encountered by the flow, whereas during the ebb the island is the last of the chain, suggesting that the observed flows are similar to leading and trailing edge effects in a developing horizontal boundary layer around the islands.