
ENVIRONMENTAL APPENDIX

**Elizabeth River and Southern
Navigation Improvements
Draft Integrated General Reevaluation
Report and Environmental Assessment**

**Appendix J – Hydrodynamic and Water
Quality Modeling**

12 December 2017



**U.S. Army Corps
of Engineers
Norfolk District**



**THE PORT OF
VIRGINIA®**

In 2016 and 2017, Hydrodynamic and Water Quality Modeling was completed by the Applied Marine Science and Ocean Engineering Department from the Virginia Institute of Marine Science to assess impacts of the No Action Alternative/Future Without Project and of the Action Alternative of project implementation. Due to length and file size, the final modeling reports can be found at an associated project's website, as the modeling covered both Norfolk Harbor and the Elizabeth River channels: <http://www.nao.usace.army.mil/About/Projects/Norfolk-Harbor-Channel-Deepening/>

Files:

Appendix J.1

Wang, R., Shen, J., Sisson, M. 2017. Assessment of Hydrodynamic and Water Quality Impacts for Channel Deepening in the Thimble Shoals, Norfolk Harbor, and Elizabeth River Channels. Final Report, Special Report No. 454, Applied Marine Science and Ocean Engineering, Virginia Institute of Marine Science. doi:10.21220/V5R41Z.

Appendix J.2:

Zhang, J., Wang, H., Ye, F., and Wang Z. 2017. Assessment of Hydrodynamic and Water Quality Impacts for Channel Deepening in the Thimble Shoals, Norfolk Harbor, and Elizabeth River Channels, Final report on the "hydrodynamic modeling." Special Report No. 455, Applied Marine Science and Ocean Engineering, Virginia Institute of Marine Science. doi:10.21220/V5MF0F

Appendix J.3:

Wang, R., Shen, J., Sisson, M. 2017. Incorporation of Sea Level Change Scenarios into Norfolk Harbor Channels Deepening Study & Elizabeth River Southern Branch Navigation Improvements Study. Final Report, Special Report No. 456, Applied Marine Science and Ocean Engineering. doi:10.21220/V5GM8Z

Appendix J.4 –

Liu Z., Wang H., Zhang, J. Ye, F. 2017. Incorporating Sea Level Change Scenarios into Norfolk Harbor Channels Deepening and Elizabeth River Southern Branch Navigation Improvements Study. Final Report on the "hydrodynamic modeling," Special Report No. 457, Applied Marine Science and Ocean Engineeringdoi:10.21220/V5BX49