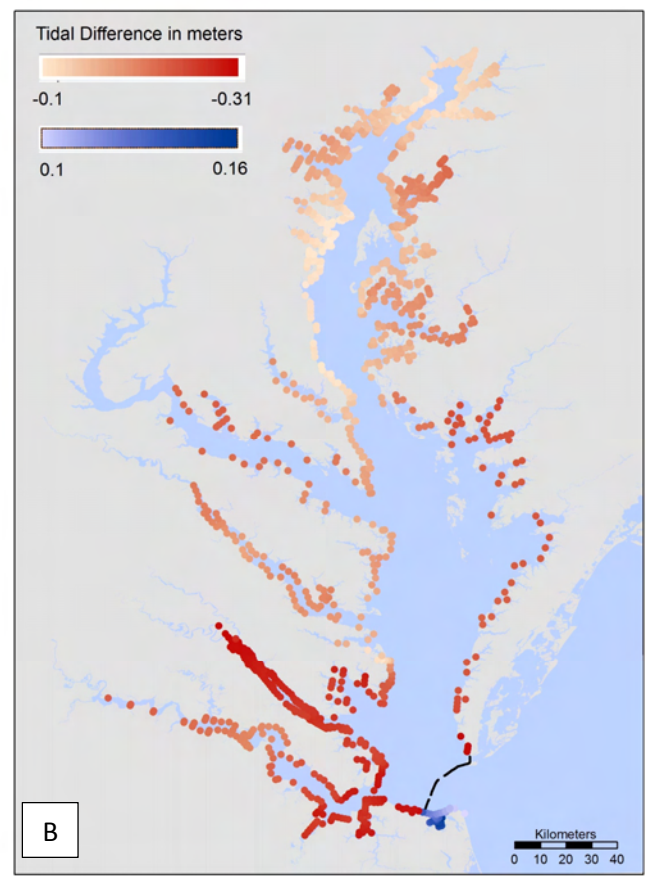
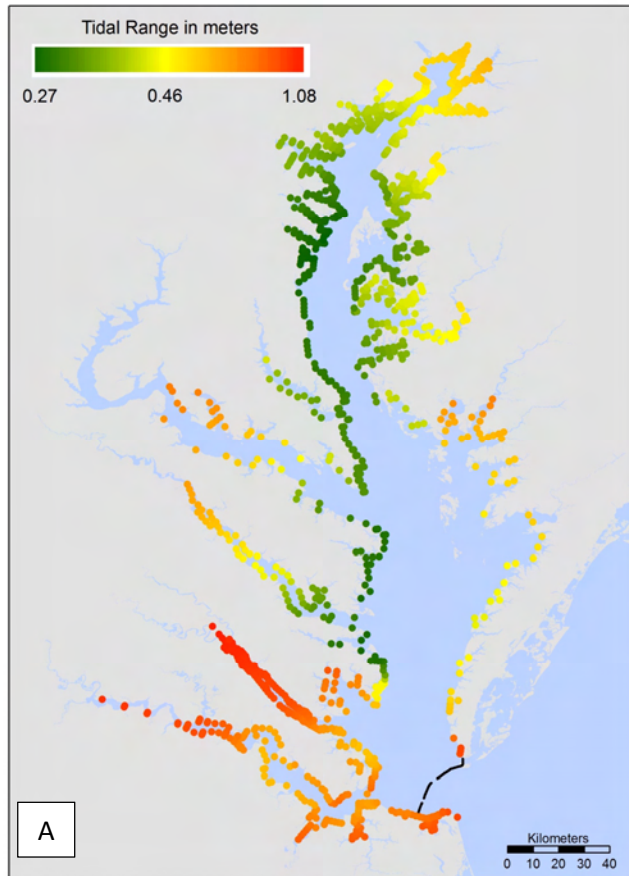


Modelled Tidal Range in Chesapeake Bay



The hydrodynamic model generated tidal ranges for current conditions (Figure A) and the closure scenario. The hypothetical storm surge barrier is shown as the black line across the Bay mouth. Currently, the highest tidal ranges occur at the mouth of the Bay and in the upper reaches of the lower Bay tributaries (e.g. James and York Rivers). Lowest ranges occur along the main stem of the Bay.

The current tidal ranges were subtracted from the closure scenario to yield tidal range differences (Figure B). Negative values mean that the closure led to a reduction in the tidal range; positive values mean the closure led to an increase in the tidal range. The hypothetical barrier lessens the tidal range inside the Bay, with a greater effect seen in the lower Bay. Just outside the barrier the tidal range is enhanced.

The change in tidal range has implications for the extent of wetlands and effects of storm surge throughout the Bay.