

Statement Regarding 1985 First Trial Court Testimony
Commonwealth of Virginia v. Emerson Eugene Stevens

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1. Prior to the trial I was asked by the prosecution to provide testimony on possible movements of a body submerged in the Rappahannock River under prevailing tidal current conditions. Scientists at the Virginia Institute of Marine Science are often asked for their expert opinion and at the time I was the primary contact for questions involving tides and tidal currents in Virginia's estuarine environment. This was based on my research and advisory work as a coastal marine scientist at VIMS since 1969 and my experience while serving as a commissioned officer in the U.S. National Oceanic and Atmospheric Administration (NOAA) from 1963 through 1968.
2. The specific question addressed to me was whether it was possible for a weighted body to be transported from point A to point B in the Rappahannock over a specified four-day period. As I was not aware of any tidal current observations being available for the time and place in question, I relied on NOAA tidal current predictions. NOAA tables then available gave current predictions at three depths near the Norris Bridge. Using current strengths and the predicted duration of flood and ebb phases I was able to calculate net current excursion distances for each depth over the period given to me. Net refers to the fact that tidal currents in estuaries alternate between landward and seaward directions over a tidal cycle with non-zero averages that tend to favor net landward movement at depth and net seaward movement near the surface.
3. There are many factors and unknowns to be addressed in predicting the movement of an object in an estuary. At what depth is the object moving and over what period of time? Along the central channel or the adjacent shoals? Moving freely with the water or obstructed? Are the predictions deviating from actual currents that prevail due to weather or other factors? Absent direct evidence, the question I was asked has no exact answer. Based on the data available to me (tidal current predictions) I could not say that it was not possible or even unlikely for a body to move from point A to point B in the course of the stated four-day period. Without other evidence I doubt anyone can.
4. Although I recall passing on my findings to the prosecutor beforehand in the first of two trials (I did not participate in the second trial) there was little opportunity for me to expand on the questions asked of me during my testimony. I testified to the best of my ability to answer the questions presented to me. My answers were based on the best information available at the time. At no time did I give any testimony that I knew, or even thought, might be false.