

capture allows visual comparisons and allows one to analyze the errors and deviations of the distortions and inaccuracies of the Herrman map. This method assumes that the NOS contemporary shoreline data is accurate to the National Mapping Standards. Thus, the NOS data is used as the basis for evaluation and to establish a mathematical control.

Base Map Preparation

To permit the comparison to contemporary shoreline data of the geographic area, both the Herrman map and the NOS nautical charts were digitized. The largest scale coverage of NOS nautical charts is 1:20,000. However, this shoreline data reduced to the Herrman map scale (1:372,250) would cause the shoreline features to coalesce. The absence of adequate line generalization software requires the shoreline to be captured at a scale close to the scale of the Herrman map. Manual line generalization at the scale of 1:250,000 allows for an intelligible shoreline plot to be digitized at a similar scale.

This shoreline data plotted at a scale of 1:675,000 (1" = 9.26 NM) for the final base map allowed for the generalizing of the intricate (detailed) shoreline of the Chesapeake Bay to resemble that of the Herrman's map. The base map was electronically captured and plotted in a