Methods

The analysis in this study used several computational and statistical methods. Geographic Information System (GIS) was utilized to summarize large volumes of data for each NSA. Data for each variable was extracted from many different departments and agencies' computer systems and this information was geographically referenced to each Neighborhood Statistical Areas (NSA). Next, the 23 analytical variables for each NSA were standardized. Standardization makes it possible for the different variables to be compared using the same scale. Subsequently, the standardized variables were merged into a common research framework and a citywide analysis was carried out.

Following this step, the variables for each NSA were evaluated to identify common characteristics. This analysis yielded three categories which reflected differences in the social, crime, physical and economic characteristics between NSAs. These were used to match individual Neighborhood Statistical Areas with other NSAs based upon their common characteristics. A detailed discussion of the categories and their attributes are presented on page 9. In instances where NSAs had common characteristics in more than one category, a finer grained analysis was carried out to determine the final assignment of the NSAs to one of the three clusters. While the assignment of a NSA to a group was rarely "perfect", the final placement of all NSAs into each group was statistically valid.

In addition to this report, a companion document, "Chesapeake Neighborhood Quality of Life Technical Report, 2006" has been prepared. It contains the complete set of data for all individual variables, as well as maps displaying the distribution of variables across NSAs.