

High Resolution Land Cover Data in the Chesapeake Bay Watershed



The Chesapeake Conservancy is pioneering the broad-scale application of emerging technologies and available high resolution aerial imagery and elevation data to develop new land cover datasets that are increasing the effectiveness and efficiency of conservation and restoration practices in the Chesapeake Bay watershed.

Accurate land use and land cover (LULC) information is one of the most important spatial datasets needed for environmental management in the Chesapeake Bay watershed. Used for everything from ecological habitat mapping to tracking development trends, LULC data are a central part of the Chesapeake Bay Program's (CBP) modeling and management efforts. Existing LULC datasets, such as the National Land Cover Dataset (NLCD), have proven extremely useful in identifying priority watersheds in need of conservation and restoration, however these data often lack the resolution needed to track fine-scale trends in land conversion or make field-scale decisions about where to focus efforts to maximize water quality benefits while protecting critical habitats.

Recognizing the importance of datasets that are relevant at the local scale, a small number of initiatives have been undertaken to produce high resolution information for individual counties or jurisdictions. While important for local decision making, discrepancies in classification schemes, accuracy, and data resolution, as well as a lack of high resolution data for the majority of the watershed, make it difficult for the CBP Partners to incorporate these data into the 2017 Mid-Point Assessment of the Chesapeake Bay TMDL suite of models. CBP Staff have indicated that a high resolution land cover dataset would benefit all of the Goal Implementation Teams and have direct benefits for almost all of the outcomes specified in the 2014 Chesapeake Bay Agreement- particularly the vital habitats, healthy watersheds, and land conservation outcomes.

