03/08/2023

Land Use Workgroup
Updated Scope, Purpose, and Goals
(original and proposed)

Original Scope and Purpose

Land use is one of the most critical data sets for the Chesapeake Bay Program (CBP) Watershed Model. Land use data have previously been prepared by the CBP Land Data Team in consultation with the CBP Watershed Modeling Team. Land use classifications have been driven by available data and by the expressed needs of CBP workgroups to inform management decisions. The work of the Land Data Team has been reviewed by CBP Scientific and Technical Advisory Committee (STAC) in 2008 and 2010. During the Watershed Implementation Plan (WIP) process, differences have come to light between the land use data set used by that CBP that covers the entire watershed over a multi-decadal period and local-scale information. These differences have caused difficulties in implementation planning and reporting in support of the WIPs. As the responsibility to implement restoration efforts is pushed to the local governments, it is vital that the land use data used in the watershed model is perceived as relevant at the local government scale. To this end, the Land Use Workgroup will directly involve stakeholders in the generation of land use data for modeling. The challenge will be to assemble a more accurate baseline dataset using local information to the extent possible while estimating historic land use acreages in a clear, transparent, and logical fashion.

Original Goals:

1. To create a temporally, spatially, and categorically consistent and accurate land use dataset from 1982 to 2012 for all jurisdictions in the Chesapeake Bay watershed using the best available data at all scales.

2. To approve methods for projecting future land use conditions for all jurisdictions in the Chesapeake Bay watershed.

PROPOSED REVISION - 2023

Proposed Scope and Purpose

Accurate land use/land cover (LULC) data are critical for informing the Chesapeake Bay Program (CBP) Watershed Model. Prior to 2017, LULC data for the Chesapeake Bay watershed were derived mainly from 30-meter resolution satellite imagery. Inaccuracies in these data at local scales related to their coarse spatial and categorical resolution and made it difficult for states to develop Watershed Implementation Plans (WIPs) and to receive credit for all reported BMPs. Because the responsibility to implement restoration efforts is ultimately born by local governments and organizations, it is vital that the land use data used in the watershed model are perceived as relevant and accurate at the scale of local governance. LULC data are also critical for monitoring and achieving multiple outcomes set forth in the 2014 Chesapeake Bay Watershed Agreement including those related to water quality, wildlife habitat, climate resiliency, watershed health, land conservation, and land conversion.

To address the need for accurate LULC data relevant to local restoration and conservation decisions, the Land Use Workgroup will oversee the development and review of high-resolution (1-meter cells) LULC data with sufficient categorical detail to inform current and future versions of the watershed model and multiple outcomes outlined in the 2014 Chesapeake Bay Agreement. The high-resolution LULC data need to be reproduced on a recurring basis from 2013 onward to assess and monitor progress towards goals and outcomes. Comparable LULC data are also needed for the 1985 to 2012 timeframe to inform the calibration of future versions of the watershed model and to provide context for interpreting current LULC trends. LULC conditions also must be forecasted into the future to inform restoration plans, enhance climate resiliency, credit nutrient reductions associated with land conservation and land use planning, and to improve the efficiency and effectiveness of restoration and conservation actions.

Proposed Goals:

1. To develop and maintain a temporally, spatially, and categorically detailed land use database that is consistent and accurate from 1985 to present for all local jurisdictions within and adjacent to the Chesapeake Bay watershed, adaptive to evolving management concerns, and relies on the best available data at all scales.

2. To develop alternative future LULC scenarios for the Chesapeake Bay watershed for assessing future nutrient loads, habitat and watershed vulnerabilities, and for crediting the effects of land use planning and land conservation for protecting the health of the Chesapeake Bay.