# Protected Lands Workgroup Science Needs

September 30th, 2021

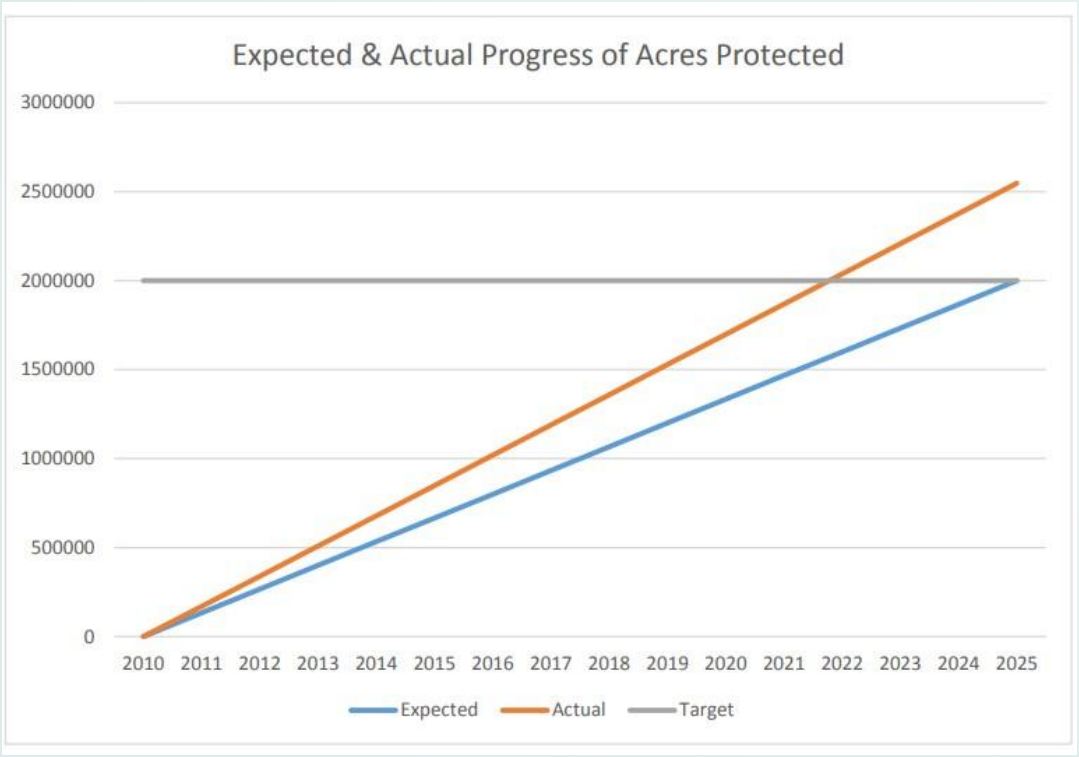
Olivia Wisner, Chesapeake Research Consortium
Jake Leizear, Chesapeake Conservancy

# Protected Lands Outcome

**Land Conservation Goal:** Conserve landscapes treasured by citizen in order to maintain water quality and habitat; sustain working forests, farms and maritime communities; and conserve lands of cultural, indigenous and community value.

**Protected Lands Outcome:** By 2025, protect an additional two million acres of lands throughout the watershed -- currently identified as high conservation priorities at the federal, state or local level-- including 225,000 acres of wetlands and 695,000 acres of forest land of highest value for maintaining water quality.

# Status: Protected Lands Outcome




- Table based on 2018 data. Biennial update of the Protected Land Status for 2020 expected in late 2021
- New methodology will provide accurate and timely land conservation information with more robust attributes to make informed decisions about land conservation. The comprehensiveness of this dataset is unique to the Chesapeake Bay region

* Actual progress is a projection based on a sustained linear growth of land conservation developed from previous years, and is subject to change depending on future updates of protected lands data.

# Status: Protected Lands Sub-Goals

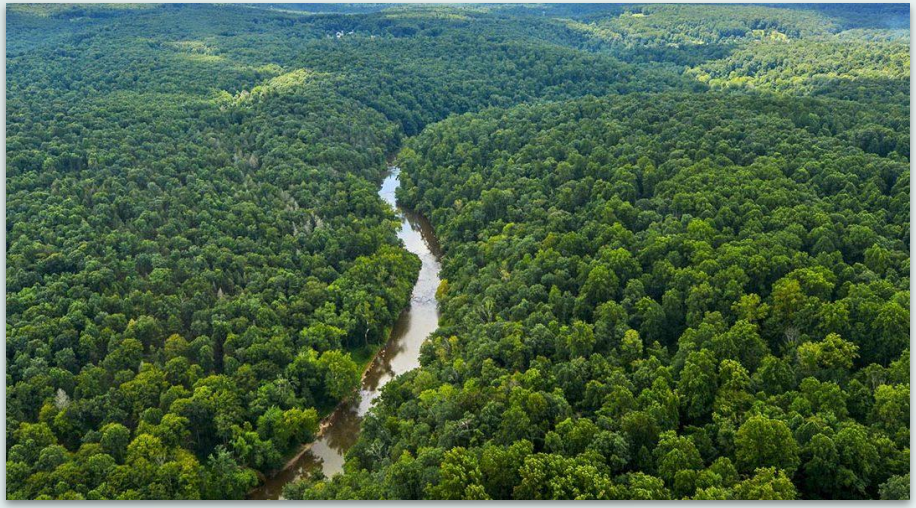


Photo credit: Chesapeake Bay Foundation

| 552,169 Acres of Forest Conserved | 79% of the Goal Achieved |
| --- | --- |

| 66,892 Acres of Wetlands Conserved | 30% of the Goal Achieved |
| --- | --- |

# Overview: Mapping Science Needs

- Expanded analysis and mapping of projected climate impacts and other pressures like development
    - Received STAC recommendations in the past
- Review of forest definitions and high-resolution mapping products
- Development of improved methodology for data collection of Chesapeake Bay Protected Lands indicator. There is also a need to improve tracking CCP tracking toward priority layers as well as regular updates of the "LandScope Reporting Tool".
- Update Important Forests Dataset
- Update Important Farmlands Dataset

# Mapping Science Needs

**Expanded analysis and mapping of projected climate impacts and other pressures like development**

- Threats to existing protected lands and unprotected high conservation value lands, such as development and climate change.
- Why? A changing environment -- precipitation regimes, storm patterns, and temperature changes -- will greatly affect the CCP Values (farms, forests, habitat, heritage, and health).

**Review of forest definitions and high-resolution mapping products**

- Review forest definitions used in states, CBP, Bay model, and CCP. Include understanding of how forested wetlands are defined and treated in Bay model.
- There are multiple definitions of forests and tree cover/canopy in use. This causes some confusion. Need to aim for consistency where possible.

# Mapping Science Needs

**Development of improved methodology for data collection of Chesapeake Bay Protected Lands indicator. There is also a need to improve tracking CCP tracking toward priority layers as well as regular updates of the "Landscape Reporting Tool".**

- Data collection, reporting and tracking toward indicator continues to be solely the responsibility of the CBP GIS team, GIT funding project to assist with this effort is underway. In addition, there are other tracking, analysis and reporting needs beyond just the CBP indicator that would benefit from a consolidated approach.
- Support more effective and strategic landscape scale conservation in the Chesapeake watershed. Jurisdictions need to improve methods and attributes for tracking land protection and understanding progress toward various conservation related goals.

# Mapping Science Needs

**Update Important Datasets (Forest and Farmland)**

- The CCP Important Forests and Farmland Datasets were produced just prior to the release of high resolution land cover data. Update the dataset using that data and incorporate any relevant outputs from other analyses.
- New high resolution (1-meter) land use/land cover data from Chesapeake Conservancy enables much great precision and accuracy for products currently based on Landsat-scale (30-meter) data.

# Overview: Other Science Needs

- Develop additional health criteria and document those values as key inputs to conservation planning and implementation.
- Filling the Cultural and Scenic Landscapes Documentation Gap
- Improve understanding of indigenous cultural landscapes.
- Conduct opportunity assessment for forest-related carbon sequestration and co-benefits

# Other Science Needs

**Develop additional health criteria and document those values as key inputs to conservation planning and implementation.**

- CCP has established a core conservation goal associated with human health that encompasses access to the water and to parks. The Partnership seeks to expand this to incorporate additional public health values including protecting source areas for public drinking water, increasing recreation corridors between urban areas and surrounding landscapes, and issues such as equity and environmental justice.

**Filling the Cultural and Scenic Landscapes Documentation Gap**

- Gap in documenting scenic and cultural landscapes. While these landscapes are often what many people value the most, the methods for identification and documentation are typically time-consuming, manual, and expensive.
- Support more effective and strategic landscape scale conservation in the Chesapeake watershed

# Other Science Needs

**Improve understanding of indigenous cultural landscapes.**

- The NPS and the Chesapeake Conservation Partnership have been breaking new ground for a decade in working with Chesapeake tribes to identify indigenous cultural landscapes.
- Improved documentation, conservation and restoration of indegenous cultural landscapes.

**Conduct opportunity assessment for forest-related carbon sequestration and co-benefits**

- Examine and quantify opportunities related to conservation, afforestation and reforestation. Determine potential geographic opportunities and projected sequestration results. Correlate with analysis of forest BMPs under the TMDL; quantify BMPs in place (Chesapeake Conservancy is mapping opportunities at high resolution as part of cooperative agreement)
- The climate crisis is driving rapidly increasing demand for quantifying carbon sequestration potential from forest conservation, reforestation and afforestation in order to inform new private and public capital investment strategies. Correlating opportunities for both high carbon sequestration and high water quality improvement could enable heightened investment strategies overall.

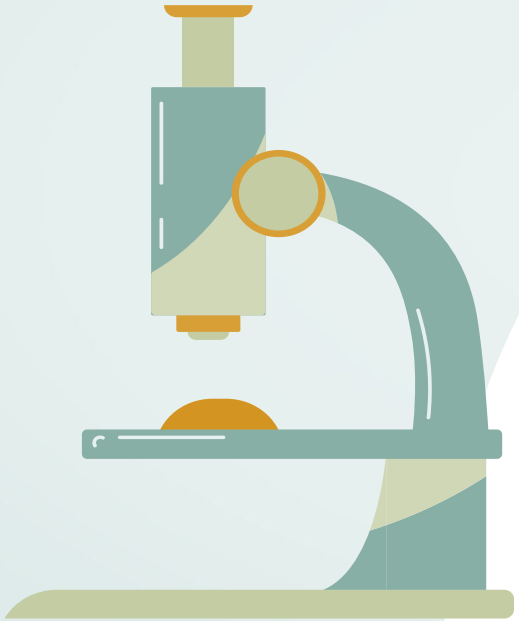
# New Science Needs

## Synthesis of Studies on Human Health and Outdoor Greenspace

Status: Partial Resources

## Synthesis of Science around conserving 50% of land by 2050

Status: Partial Resources



Questions?