

DRAFT Strategy Review System Presentation – HWGIT
December 12, 2022

QUARTERLY PROGRESS MEETING – February 2023
Chesapeake Bay Program



Land Use Options Evaluation

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Photo: Chesapeake Bay Program

Through the Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program has committed to...



Image: Conservation Innovation Center

Goal: *Land Conservation*

Outcome: *By the end of 2017, with the **direct involvement** of local governments or their representatives, **evaluate policy options, incentives and planning tools** that could assist them in continually improving their capacity to **reduce the rate of conversion of agricultural lands, forests and wetlands** as well as the rate of changing landscapes from more natural lands that soak up pollutants to those that are paved over, hardscaped or **otherwise impervious**.*

Land Use Options Evaluation - Context

2014 – This outcome was included in the Agreement to provide tools and support to local governments to ensure their capacity to plan for and mitigate land change impact. – source

2014 “Current” condition? – WIP process shed light on the differences between CBP land use and local-scale information

•Why this Outcome? – This outcome responds to public comments related to the need to address the extent and impact of land use change (the Land Use Workgroup and the Water Quality GIT were instrumental in this outcome)



What is our Outlook and Recent Progress?

35

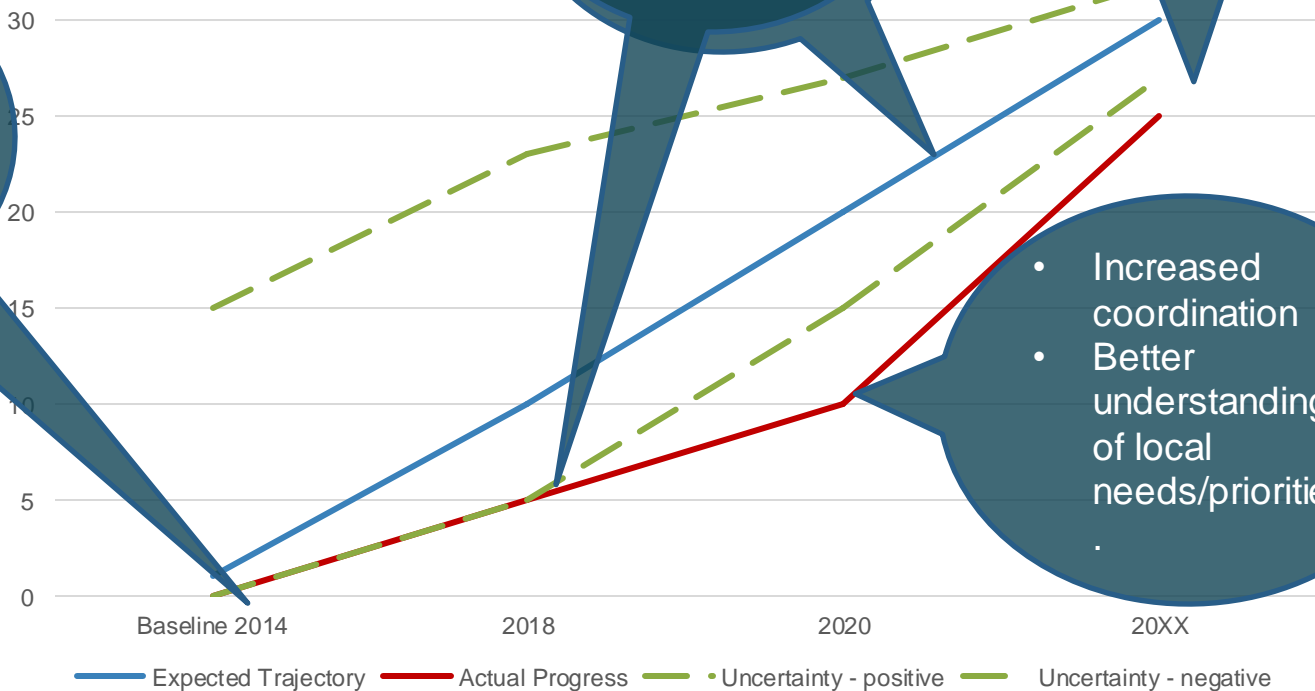
Need:

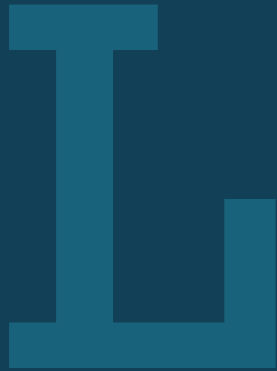
- Local land use data
- Increase capacity to reduce conversion

- High resolution land use/land cover
- Developed resources

- Tie pieces together
- Did we meet needs??

- Increased coordination
- Better understanding of local needs/priorities





Learn

What have we learned in the last two years?



Successes and Challenges

What have we learned?

- We are dependent on the collaboration and participation of related outcomes and workgroups, as well as their work/products
- 2-way input and direct involvement of locals requires a sustained pathway of mutual listening and learning.
- This outcome is qualitative there remains a need to understand if our efforts are helping to reduce the rate of land conversion

USGS Land Change Monitoring, Assessment, and Projection Data Thirty Years of Change (1985 – 2015)

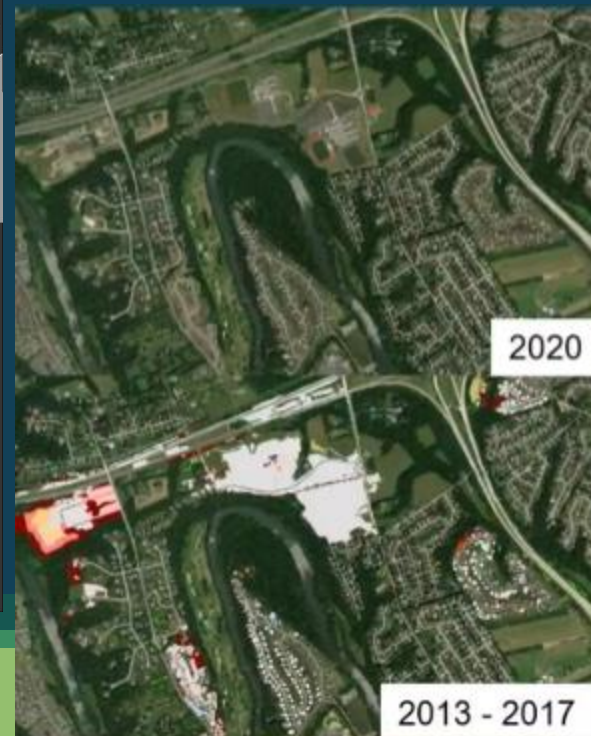
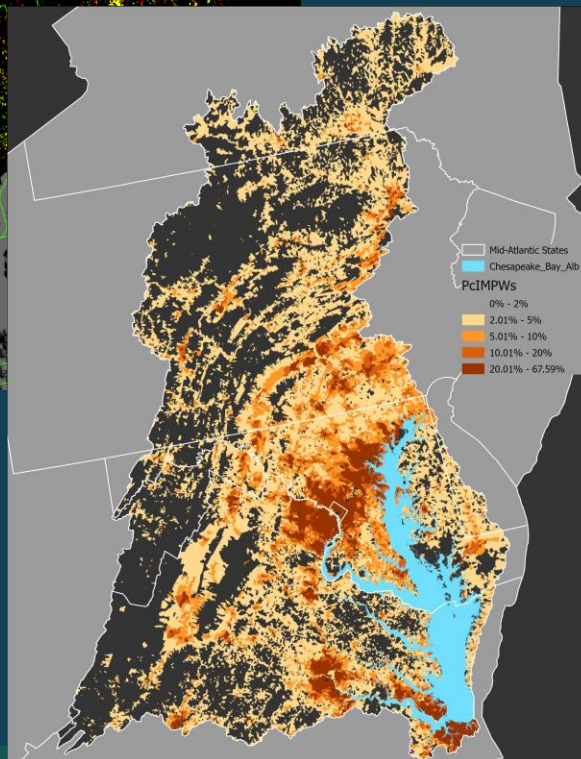
LCMAP_Reclassified

- No Pattern
- Afforestation
- Deforestation
- Harvest_TC
- Harvest_UTC
- Urbanization
- Crop Rotation
- Wetland Dynamics
- Pre-Development_D
- Pre-Development_UD
- Water
- Not classified
- Mid-Atlantic_Countries
- Chesapeake_Bay
- Chesapeake_Bay

Rates of conversion:

- Farmland
- Forest
- Wetland
- Impervious Cover

Increasing knowledge at a scale
that is locally relevant



Slides courtesy of Peter Claggett, USGS CBP

Chesapeake Bay Environmental Justice and Equity Dashboard (DRAFT)

Overview

Demographic Indicators

Cross-Outcome Applications

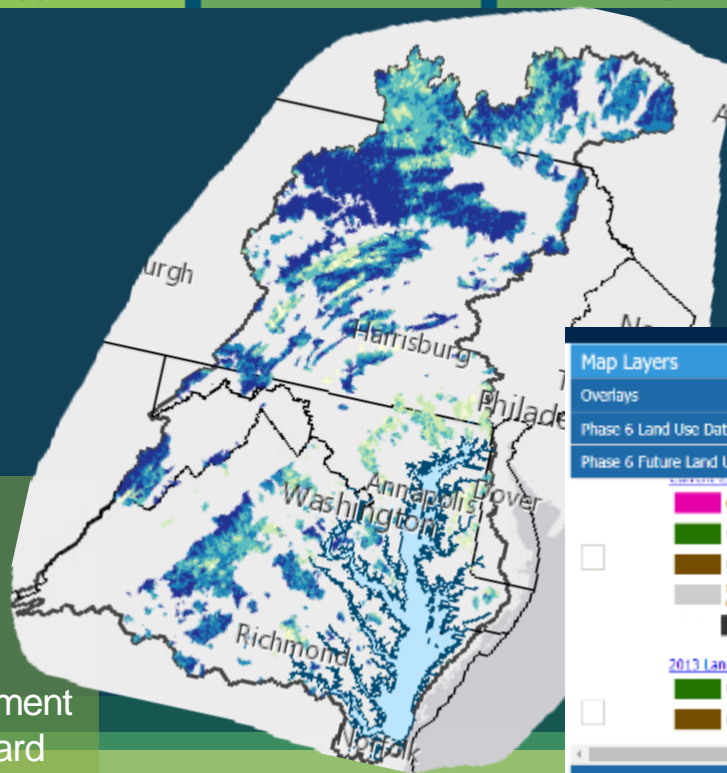
Current Initiatives

Acknowledgements

.."Evaluate policy options, incentives and planning tools that could assist in continually improving capacity.."

Data and Tools

- Hi-res land cover
- Phase 6 Land Use Viewer
- Data Dashboard
- Chesapeake Healthy Watersheds Assessment
- Environmental Justice and Equity Dashboard
- Targeting Portal



Map Layers

Overlays

Phase 6 Land Use Datasets

Phase 6 Future Land Use



2013 Land Use/Cover Projection Base



Base Map

Data and Metadata Download

Submit Comments to USGS

Projects

- Cross-Outcome Watershed Educational Materials
- Conservation of Working Lands-Finance Forum consultants
- Improving Technical Service Delivery for Private Landowners
- Targeted local outreach for green infrastructure in vulnerable areas
- Chesapeake Watershed Finance Intensive Workshop

Communications

- Land Use Resources Guide
- Forest Restoration Strategy
- Land Policy Data Dashboard resources
- Tree Canopy Fact Sheets
- Presenter, panelist, speaker



Coordination and Communication

- Work with relevant CBP groups (Local Government Advisory Committee, Local Leadership Workgroup, Healthy Watersheds GIT, and Forestry Workgroup)
- Community Response to Land Use Change in cooperation with Rachel Felver, Kristin Saunders and others (GIT Funding 2022)

CBP GIS/Land Data team presentations

- ICPRP Potomac Basin Comprehensive Water Resources Plan. (2021)
- Special session at Delaware Chapter of American Planning Association (2022)
- County Commissioner's Association of Pennsylvania (2022)

Advances in Science and Data

- Impervious cover Change indicator: the 2022 edition of the LUMM, a single metric on impervious cover change is presented. Subsequent editions of the LUMM will include the outstanding metrics and a few supporting measures such as “effective” impervious cover change and riparian tree cover change.
- Publicly released the on high resolution land use land cover data and change metrics 2017/18 land use and one of the 2013/14 to 2017/18 change.
- Presented updates to the LUMM to STAR, LUWG, HWGIT and the Management Board



On the Horizon

Scientific, Fiscal and Policy-related developments

Scientific:

- Additional analysis of High-resolution land cover and related metrics (1m, 10m) and change products
- LCMAP – Analysis and distillation
- Evolving communication/outreach plan



On the Horizon

**Scientific, Fiscal and Policy-related
developments**

Policy:

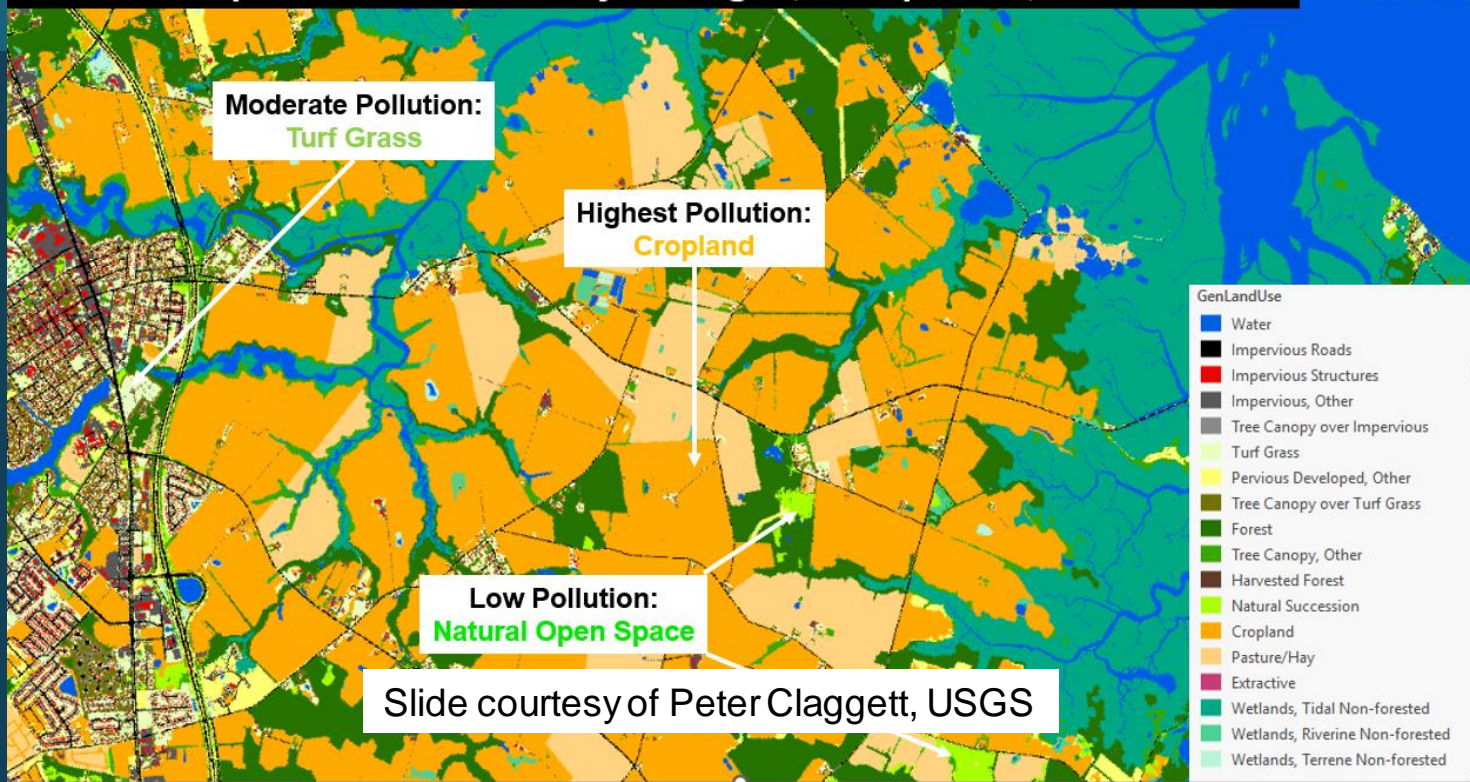
- Better incorporate DEIJ and Climate considerations.
- Integrate climate and DEIJ metrics

Communication, Translation and Engagement:

- Translate, format, package and flow information through to trusted sources.
- How to effectively engage locals directly (New GIT funding will help to address)

Opportunities and Ideas

- Permitting for new developments in the counties that intersect the healthy watersheds, as a proxy we are monitoring land use and land cover and we have a forecasting model.
Permit database: GIT funding?
- What type of analysis should we do and what do we do as a result of the Land Use Metrics?
 - Evolve to support a broader array of local uses of the data
 - Supporting flood, hazard mitigation, climate resiliency planning



Connection to the [Comprehensive Evaluation of System Response](#)

- Both physical (BMP effectiveness) and social (behavioral change) aspects of implementation need revision to make substantial progress in reducing nonpoint source nutrient/sediment loads



Adapt

How does all of this impact our work?



**Based on what we
learned, we plan to ...**

**How will our work change over the next two
years?**

**Management Strategy evolution:
Opportunity to better integrate the LUMM
and LUOE outcomes.**



Equitable and inclusive restoration ...

- Summarize your answer to Narrative Analysis question #5.
- What opportunities exist to work with historically underserved communities and ensure that meeting our outcomes benefits all residents of the Bay watershed?



Fill the Gap

*How can the Management Board
help achieve the Outcome?*



Filling the Gap

- BECAUSE of...[where we are, what we learned, and the challenges ahead...]
- Over the next 2 years, we PLAN to...
- BUT – to fill the gap – [go to next slide]



Filling the Gap

- We need your help with...
- Extend the monitoring period
- A longer record of change metrics are needed – 2032 to better understand trends.



Discussion

ChesapeakeProgress Icons



RECENT PROGRESS
INCREASE



RECENT PROGRESS
DECREASE



RECENT PROGRESS
NO CHANGE



RECENT PROGRESS
COMPLETED



OUTLOOK
ON COURSE



OUTLOOK
OFF COURSE



OUTLOOK
UNCERTAIN



OUTLOOK
COMPLETED