

BIENNIAL STRATEGY REVIEW SYSTEM

Chesapeake Bay Program



Logic and Action Plan: LUMM and LUOE outcomes

Land Use Methods and Metrics *and* Land Use Options and Evaluation – 2023-2025

Long-term Target: (the metric for success of Outcome)

Two-year Target: (increment of metric for success)

Instructions: Before your quarterly progress meeting, provide the status of individual actions in the table below using this color key.
Action has been completed or is moving forward as planned.
Action has encountered minor obstacles.
Action has not been taken or has encountered a serious barrier.

Additional instructions for completing or updating your logic and action plan can be found on [ChesapeakeDecisions](#).

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
What is impacting our ability to achieve our outcome?	<i>What current efforts are addressing this factor?</i>	<i>What further efforts or information are needed to fully address this factor?</i>	<i>What actions are essential (to help fill this gap) to achieve our outcome?</i>	<i>What will we measure or observe to determine progress in filling identified gap?</i>	<i>How and when do we expect these actions to address the identified gap? How might that affect our work going forward?</i>	<i>What did we learn from taking this action? How will this lesson impact our work?</i>
Scientific and Technical Understanding: Lack of historical context to interpret recent trends in LULC change.	Backcast development, natural, and agricultural lands to the mid-1980's	Interpreted historical high-resolution aerial imagery and/or terrain data.	Dedicated time to focus on this effort by CBP GIS Team.	Completion of the data with accuracy verification.	Summer 2025-draft, Summer 2026 final.	
Financial Resources: Funding for more frequent, moderate resolution satellite representation of land conditions.	Solicitation of support from other federal agencies to fund the next five years of data collection.	Support from other federal agencies; demonstration of the value of more frequent monitoring data.	An additional \$500K per year over the years 20024-2029 for action 1.8.	Funding commitments.	February 2024	

Political and Educational Challenges: Sustainability of long-term monitoring. Continued monitoring of high-res land use change through the year 2034 is needed to support the achievement of multiple outcomes and the Phase 7 model.	The Management Board agreed at their March 2023 meeting that continued monitoring is a priority for the partnership.	New agreement for continued monitoring. Securing additional funding.	Continued support for this effort from the CBP Partnership and continued use of the data to inform a variety of CBP outcomes.	A new cooperative agreement for the period 2029-2034.	For the 2024-2029 period, a new agreement needs to begin October 1, 2024 and a second new agreement needs to begin October 1, 2029.	
Political and Educational Challenges: Reducing land conversion rates.	Development of land conversion rates in 2024.	Communication of land conversion rates along with applications to engage the public.	Reducing the rate of land conversion will require land use planning and land conservation actions implemented by local organizations.	Long-term monitoring of land conversion rates presented in historical context and relative to population growth.	Summer 2027	
Engaging Local Governments: Engaging local governments and interest groups in the LULC metrics.	Development of a new land use strategy.	Communication tools for LULC metrics and funding for state translators of high-res LULC change metrics.	High levels of engagement in receptive jurisdictions.	Testimonials from local governments actively using the LULC data.	2026-2027	
DEIJ and Climate: Account for Diversity, Equity, Inclusion and Justice (DEIJ) and climate considerations into work done by LUMM and LUOE.	Coordination with the Climate Resiliency workgroup. Development of a new land use strategy.	Coordination with the Diversity workgroup.	High levels of engagement with underserved and minority communities.	Underserved and minority communities see value in the LULC data to inform issues they value.	2026-2027	

ACTIONS – 2023 - 2025

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
Management Approach 1: Monitor changes in land use/land cover and forecast changes into the future.					
1.1	Assess the accuracy of the 2017/18 LULC data and the accuracy of the LULC	Achieve accuracies equal to, or better than, those achieved for the original 2013/14 data	Chesapeake Conservancy	Watershed counties	Summer 2023

ACTIONS – 2023 - 2025

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
	change from 2013/14 to 2017/18				
1.2	Finalize and publish the 2021/22 LULC data, along with updating and reissuing the 2013/14 and 2017/18 LULC data.	Map high-resolution (1-meter) land use/land cover wall-to-wall and change products, remapping previous years in the process.	USGS, Chesapeake Conservancy, University of Vermont.	Watershed counties	June 2024
1.3	Backcast major land use classes from 2013 to mid-1980's.	Annual land use dataset from mid-1980's to present.	USGS	Watershed counties	Summer 2026
1.4	Forecast future changes in land use/land cover through 2075	Assess the vulnerability of habitats and watersheds to land use change	USGS	Watershed counties	Summer 2024
1.5	Compare annual construction permit and timber permit data to high-res LULC data.	Reduced double counting of transitional land uses in CAST and more accurate near-term land use forecasts.	USGS, USWG, FWG, LUWG	Watershed counties	2023-2025
1.6	Finalize and publish the hyper-res hydrography data.	Watershed-wide hyper resolution hydrography data.	Chesapeake Conservancy	Watershed	Summer 2024
1.7	Finalize LULC change metrics: impervious cover, forest, farm, and wetland land conversion to developed lands, riparian tree cover, and effective impervious cover.	Metrics posted and approved for Chesapeake Progress.	USGS, CBPO GIS Team.	Watershed catchments	Summer 2023 (impervious); Summer 2024 (all others)
1.8	Initiate a new 5-year cooperative agreement to continue monitoring LULC	New cooperative agreement	US EPA-CBP	Watershed counties	Summer 2024

ACTIONS – 2023 - 2025

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
	change through the year 2029.				
1.9.1	Oversee GIT funded project on mapping non-tidal vegetated wetlands in areas with outdated wetland maps.	Development of new approach to cost-effectively model non-tidal vegetated wetlands. Develop workflow and cost-estimate for making these features Federal Geographic Data Committee (FGDC) standard compliant.	GIT funding Project Technical Lead with contractor support. Habitat GIT, Wetlands WG, LUWG, CBP GIS team.	CB watershed west of the fall line	Summer 2024
1.9.2	Oversee GIT funded project on monitoring vegetation condition throughout the DelMarVa Peninsula.	Report covering the data, methods, and results for mapping trends in vegetation condition and moisture and discuss their value for differentiating low and high marsh and for identifying areas with evidence of marsh migration and dissolution.	GIT Funding Project Technical Lead with contractor support. Habitat GIT, Climate Resiliency WG, Wetlands WG, LUWG, CBP GIS Team.	DelMarVa Peninsula	Summer 2024
Management Approach 2: Quantify impacts of land conversion of water quality, healthy watersheds, and communities.					
2.1	Provide high-res and forecasted LULC data for 2-year CAST updates	Release of CAST-25 with updated LULC data.	USGS	Watershed counties	September 1, 2024

ACTIONS – 2023 - 2025

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
2.2	Integrate the high-res and forecasted LULC data into the Chesapeake Healthy Watersheds Assessment (CHWA) 2.0	CHWA 2.0 uses the most accurate and up-to-date data.	USGS	Watershed counties	Summer 2023
2.3	Interpret the relevance of LULC change for other CBP outcomes.	Incorporation of high-resolution LULC and hydrography data into all other relevant outcomes.	CBP GIS team, HWGIT, LUWG, and other Outcome leads		Summer 2025
2.4	Develop improved water quality “credit” incentives for land conservation and land use planning.	Development of a credit	WQGIT LUWG	Watershed Wide	2023-2025
2.6	Quantify impact of land conversion on communities.	Research/analysis on how CBP tools and data are used to understand land conversion.	HWGIT, LUWG, Potential GIT funding	Watershed wide	2023-2025
2.7	Determine how underserved communities can be helped by data and resources related to policies, incentives and planning tools to reduce land conversion.	Completed assessment.	HWGIT LUWG Diversity WG GIT 5 Comms Team	Specific Communities within the Watershed	2023-2025
Management Approach 3: Communicate the results to the public, elected officials, and to the Bay Program.					
3.1	Oversee a GIT-funded project on Community Response to LULC change.	Final report containing a complete summary of the project, including audience findings,	GIT Funding Project Technical Lead	TBD – priority communities	Summer 2024

ACTIONS – 2023 - 2025

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		recommendations for next steps, overview of the vulnerability analysis, maps, datasets, and communications products.	with contractor support. CBP Communication Team, HWGIT, Local Leadership WG.	will be selected by Oct 2023.	
3.2	Develop story maps, web viewers, and other tools to communicate land change information	Development of story maps, web viewers, and other communication products.	LUWG, CBP GIS Team	Watershed wide.	2025
3.3	Development of a new Chesapeake Bay land use strategy, inclusive of land conservation, land use planning, climate resiliency, and environmental equity and justice.	Development of integrated strategy focusing on: 1) incentivizing infill and redevelopment, particularly in underserved communities; 2) facilitating public outdoor recreation and environmental education through land conservation; 3) maintaining ecosystem services and healthy watersheds; 4) minimizing climate impacts on infrastructure; and 5) addressing local concerns.	LUWG, Local Leadership WG, HWGIT and CBP Strategic Engagement Team	Watershed wide.	Summer 2025
3.4	Translate, communicate, and develop materials to convey local engagement needs	Obtaining dedicated annual CBP funding for jurisdictions	HWGIT, LUWG, Comms Team, CBP Leadership	Watershed wide	Ongoing