



Chesapeake Bay Program
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LUWG Office Hours September 2026: Chesapeake Bay Land Change Model (CBLCM)

September 16, 2026

1:00 pm - 2:00 pm

[Meeting materials can be found at the meeting webpage \(linked\).](#)

Purpose: Discuss and provide feedback on Chesapeake Bay Land Change Model (CBLCM) updated results.

Meeting Minutes

I. Introduction and Announcements

(1:00 – 1:05)

- Wed, September 23rd: Joint LUWG/USWG meeting

Requested Action: Non-decisional

Lead: Jackie Pickford, Land Use Workgroup Coordinator

Materials: N/A

II. Chesapeake Bay Land Change Model (CBLCM) Discussion

(1:05 – 2:00)

Sarah presented on the forecasted land uses and how they translated into Phase 7 Land Uses (used in CAST). See Discussion 1 for the discussion related to this topic.

Peter reviewed results from CBLCM Run #3 and information on proposed data centers as a follow up from the August LUWG meeting. See Discussion 2 for the discussion related to this topic.

Requested Action: Pre-decisional

Lead: Peter Claggett, USGS, Sarah McDonald, USGS

Materials: [Web Viewer](#), Presentation, Updated FAQ Document.

Discussion 1

- Dave Montali: Are the construction acres from the land use data, or what the states reported from 2022?
 - Sarah McDonald: This is what the mapped construction acres are in 2022. This does get reconciled with CAST and reported data. We use our construction acres that are mapped to spatially allocate what land river segments the reported state acres go to. We never actually use the construction area that we map; we always defer to what the area that the

states report is, but we determine where in the county that should go based on where we mapped it.

- Dave Montali: So the 2022 construction acres are what is provided by states, broken down into land river segments?
- Sarah McDonald: The 2022 values are what was mapped as construction in that year.
 - We map the data, and then the timeseries of the mapped data is put into CAST, along with the reported construction data from the states. Then that data and CAST are put together, merging the mapped data and the reported data. So we don't bring in the reported data until it actually gets to CAST.
- Cassie Davis: Are the state-specific median impervious cover equations relating to residential lot size and % impervious created using the land use or provided by states?
 - Sarah McDonald: It is a combination of land use and parcels, but not provided by the states.
 - Cassie Davis: For some states, it might vary by county. But having it by state is good.
- KC Filippino: For construction, if you hand Jess the mapped data, and the states give reported data, she rectifies it - what happens if the state data is different than what is mapped?
 - Sarah McDonald: Reported acres are what is always used. If it is more, the rest comes proportionately from development. If we map more than what is reported (which happens rarely if at all), then our excess mapped would go to compact impervious.
 - Jackie Pickford: Those methods were approved by Watershed Technical Workgroup.
- Dave Montali: You will sit down and do this mapped data out to 2040, and the land change model doesn't change? We are shifting to how much there is in progress scenarios, correct? When states submit reported data for 2026, it won't affect these calculations in the land change model will it?
 - Sarah McDonald: That is correct. It will not.
- Dave Montali: Is it reasonable to take new development from wetlands?
 - Sarah McDonald: You mean not shrinking wetlands at all when converting to development?
 - Dave: It looks like there is a protocol that says when accounting for development from natural land use, we are taking a portion of it from wetlands. Does development really happen on wetlands? Maybe it shouldn't be taken from them
 - Peter Claggett: Tidal wetlands are off the table; no tidal wetlands in phase 7 CAST, those go into estuarine models, and are unlikely to get developed. In Phase 7, the other inflood wetlands (non tidal wetlands) are a small percentage of total forested area, and are fair game. In the past, for Phase 6, it was decided to proportionately (based on how they are in the landscape) take from forests and the two wetlands classes because we have taken tidal off the table.
 - Peter Claggett: If it's of interest, we could create a scenario where we don't convert any wetlands or large tracts of forests, etc. We can do these alternative scenarios for individual states for WIPs or other CBP decision purposes, but in terms of the baseline of trends, we want to make it as few as possible for adding decisional rules.
- Rosa Hance: Thinking of the definitions of wetlands: have any definitions evolved in Phase 7, or is it similar to last time around?
 - Peter Claggett: They are similar, slightly rephrased but intended to represent the same features.

- For our wetland class, we use mapped NWI (National Wetland Inventory) wetlands. In PA, it is augmented with a probabilistic estimate for forested wetlands only. With the Phase 7 model, as it was with Phase 6, wetlands behave completely the same as forests. Bay program watershed models don't care if it is wetlands or not, they just care if it is natural. The distinction is there, but it has never made a difference.
- Sarah McDonald: One thing we are working on is finishing the land use chapter of Phase 7 documentation, which will cover lots of questions coming in. That is charged to the land use workgroup to review at some point.

Discussion 2

- KC Filippino: Questions about Tables 3 and 5 of FAQ:
 - Table 3: about observed vs simulated conversion of natural/farm. Trying to understand the simulated farmland conversion, particularly in VA, where what was observed was 828 is now 2,000. Is that all bc of solar?
 - Peter Claggett: We have not parsed the data yet, have to manually do that but I think that that is probable. We can parse that before the land use meeting.
 - Table 5: not understanding the discrepancy between A and B. Which one is mapped?
 - Peter: Both a and b are mapped. A is mapped by us in high resolution data. B is mapped by USGS and Lawrence Berkeley Labs with a national photovoltaic data set as polygons for the whole country, mapping utility scale solar fields. We downloaded that in summer 2025, which shows more solar than what we mapped in 2021. We have stats from industry from 2025 in terms of MW but we don't want to double count what we map and what Lawrence Berkeley Labs maps.
 - For data centers, I hear what you are saying; I don't love that they will be excluded, but I get it. Page 16, you have that the direct impact could be the conversion of 4,000 acres of undeveloped land. Could you parse out what that land is (farms or natural)?
 - Peter Claggett: Yes, we can pull the underlying high-res land use and tell you the land use and how much is forest and farmland by state.
- Dave Montali: I noted in version 3 some changes for West Virginia counties, and have questions that could follow up with later if that is better. I saw in version 3 in Berkeley and Jefferson counties in WV: county stats in terms of how much more developed land will there be in 2040? For Berkeley, I saw a change in observed housing units from 2010-2020, which is something I didn't think would be changed. The annual change in housing units was 470 for Berkeley in version 1 and 2, now it's 610 in version 3. Why was that changed?
 - Peter Claggett: When producing the data originally, I drew from info on the American Community Survey about vacancy rates, household size, group housing, etc, rather than the Decennial Census. The population was from the Census though. That introduced an error and when I updated the variables at request of MDP with variables directly from the census, there were corrected values for housing units, which also affected some of the future projections for states like WV that did not have independent employment projections (future employment is scaled to population). When we tried to estimate housing units with the census formulas, it wasn't working out correctly and we had to introduce an adjustment factor to make sure that everything lined with the reported census. That was not perfect, and by changing the variable to getting them directly from the census, everything matched up perfectly and we did not need that correction factor. That affected the future forecast because we were no longer tweaking it up or down.
 - Dave Montali: I saw that in Jefferson County, the numbers were decreased. There was a big impact that I saw in the change in the commercial area in Berkeley County. Almost 5

times more commercial area than we had in version 2. That annualized commercial area change in Berkeley (53), is greater than it was in version 1 and version 2. That change in observed resulted in a change in projected that is 5 times higher than what it was in version 2. I have no context, maybe that is a better number.

- Peter Claggett: For commercial, it increased the annualized commercial area change from 2020 to 2040 simulated by a factor of 2 to 3 for all jurisdictions. We were overestimating the density of commercial development in versions 1 and 2, and were getting numbers much lower than observed. To bring those numbers in line to what we observed, we adjusted the job densities down. In some counties it worked perfectly, and in other counties it started overestimating compared to the observed. It's a bit of a blunt change but was needed because densities were way too high. It speaks to the complexity of generating commercial densities with data that is currently available, which can be challenging.
 - The residential area also went up in Berkeley county because the way we sample residential lot size / density was also altered between version 2 and version 3. We found that this change caused a few errors in a few counties, and we are looking into correcting that. The commercial area change we expected, but the residential area change we did not expect.

Jackie Pickford: If you feel strongly about including data centers in the forecast, rather than just relying on the high-res land use, please let me know.

- Norm Goulet: let's not include.

III. Adjourn

(2:00)

Next Meeting: Land Use Workgroup and Urban Stormwater Workgroup Joint Meeting, September 23rd, 1-3pm.

Attendees:

Jackie Pickford, USGS
Sarah McDonald, USGS
Peter Claggett, USGS
Michelle Katoski, USGS
Daniel Koval, CRC
Cassie Davis, NY DEC
Cass Klingamen, NY DEC
Alisha Mulkey, MDA
Michaela Kuykendall, MDA
Deborah Sward, MDP
Lori Brown, DNREC
Joseph Schell, DNREC
Holly Walker, DNREC
Rachel Owrutsky, DNREC
Young Tsuei, DC DOEE

Tyler Trostle, PA DEP
Thomas Butler, EPA
Ashley Hullinger, PA
Kevin Mclean, VA DEQ
Ariana Johns, VA DEQ
Callie Sams, WV Save our Streams
Maggie Woodward, CBC
Marel King, CBC
Rosa Hance, Choose Clean Water
Coalition
KC Filippino, HRPDC
Helen Smith, Deveroux Consulting
Dave Montali, Tetra Tech
Normand Goulet, Nova region