CHESAPEAKE BAY PROGRAM LAND USE WORKGROUP
Face-to-face Meeting Minutes
September 4, 2019
10:00 AM - 3:00 PM
Meeting Materials: link

Summary of Actions and Decisions:
Action: The LUWG will approve the draft June meeting minutes on the October 2nd LUWG conference call.
Action: Send out county tabular land use and loading data to LUWG members that documents the deltas between the 2025 Current Zoning and the 2025 Land Policy BMP scenarios.
Action: Resend the Land Use Methods and Metrics workplan to LUWG.
Decision: The LUWG approved KC Filippino as the LUWG co-chair.
Action: The LUWG will review and comment on the decision rules word document for updating the Phase 6 land use from 2013 to 2017. Please send comments to Peter Claggett.
Action: State representatives should contact Rachel Soobitsky if they have any suggestions following the local data gathering presentation.
Action: A timeline will be developed to visualize the timing of local data calls for the next several years.
Decision: The LUWG recommends prioritizing the Choptank and Shenandoah as priority areas for mapping high-resolution hydrography. If there are further recommendations, please email the group.
Action: At a future meeting, CIC will present a prioritized list of HUCs to map high-resolution hydrography. The LUWG can review and edit this list based on workgroup priorities.
Action: Please send feedback on the CBLCM future functionality slide (slide 6, CBLCM Future Functionality Presentation).

Welcome, Roll Call, Review of meeting minutes, Action Item Update – K. Berger, MWCOG
- **Action:** The LUWG will approve the draft June meeting minutes on the October 2nd LUWG conference call.
- **Action:** Send out county tabular land use and loading data to LUWG members that documents the deltas between the 2025 Current Zoning and the 2025 Land Policy BMP scenarios.
- **Action:** Resend the Land Use Methods and Metrics workplan to LUWG.
- Berger proposed KC Filippino as the LUWG co-chair.
  - **Decision:** The LUWG approved KC Filippino as the LUWG co-chair.

2019 Milestone Updates: Updating land use to 2017 conditions (50 min) – R. Soobitsky, CIC; P. Claggett, USGS
- Soobitsky gave an update on the hotspot analysis used to create a draft update of the 2013 high-res land cover to 2017.
  - Soobitsky noted that all analysis is based on imagery, not ground truthing.

- Claggett presented the decision rules needed to translate land cover changes observed in the hot spots of change and from the new 2016 National Land Cover Dataset into the Phase 6 land uses.
    - Claggett noted that these numbers include everywhere in the watershed except VA for the values to be comparable.
    - Claggett noted that the impervious NLCD change (2013-2016) is a change from non-impervious to impervious (2011-2016). That may be why we see more change in NLCD than in high-resolution change.
    - Berger noted that these rules are for 2019-2021 milestone land use and will be redone in 2021 using more accurate data than the hotspot analysis. These are important rules; however, they may not be as important as the rules when we employ 2021 land use.
    - Claggett noted that much of change in the hotspot analysis were hand digitized and represent real change.
- Martin asked how this forecast compares to the previous forecast that we thought would happen.
    - Claggett: That's a question I haven't been able to answer. We don't yet have a CAST improved comparison for 2017 that incorporates the Ag Census.
    - Martin: It is a concern that this may compound error in the forecast out to 2025. I'm not sure that it should be incorporated into milestones or into CAST at this time.
- Montali: It seems like the two methodologies are doing something different with agriculture, I would like to see a fix for this issue in the decision rules write up.
- Claggett noted that we have new zoning data for 90 out of 206 counties from Rachel Soobitsky that are not incorporated yet.
- Claggett noted when local data is received, he had to make decisions on whether or not to include data. In some areas, sewer had to be modeled, and in others local data was used.
- Berger noted that it would be helpful to have all local data available for us to review and verify which data is being used.
- **Action:** The LUWG will review and comment on the decision rules word document for updating the Phase 6 land use from 2013 to 2017. Please send comments to Peter Claggett.

2019 Milestone Updates: MS4 and Sewer Service Area Updates; 2025 Future Scenario Update (45 min) – P. Claggett, USGS
- Claggett discussed new local data on MS4s and Sewer service area data used to inform the new Milestone period.
- Claggett discussed new data used to inform the 2025 Current Zoning scenario and results from that the scenario.
- Options for utilizing local zoning data in the updated 2025 Current Zoning scenario will be presented.

- The LUWG will recommend what information it would like to review prior to finalization of the milestones and how and when newly acquired local zoning data should be included in milestone updates.
- Member preference on prioritization options (slide 12, 2019 Land Use Update for 2020-2021 Milestone Period Presentation)
  - Goulet: Option 4: Don't update zoning until January 2021
  - Martin noted that option 1 and 4 are equivalent.
  - Griffin: Option 2: at least we are updating for states that are using this in WIPs.
  - Martin noted that he would steer away from option 2.
  - Montali: This does not affect WV.
  - Sward: I will take back to MDP for an answer.
  - Fisher: This may not be of high importance at this time.

Retrospective Look at Local Data Gathering Process (30 min) – R. Soobitsky, CIC
- Soobitsky discussed how and from whom the Conservancy gathered local data on a state-by-state basis.
- LUWG state partner representatives will be asked to approve the Conservancy's approach to local data gathering on a state-by-state basis, which can be used again in 2022-23.
- Maryland
  - Soobitsky: We will follow same process but reach out at the state level first.
  - Sward agreed with the approach.
- Virginia
  - VA agreed with methodology with the addition of the Dept. of Health
- District of Columbia
  - Berger noted that DOEE should be involved since they are knowledgeable of the WIP process. Katherine Antos or George Onyullo would be good contacts.
- West Virginia
  - Thompson agreed that the list is comprehensive and recommends the addition of planning and development councils (9 in the state).
- Pennsylvania
  - Stoe agreed with the addition of the GIS team at DEP.
- NY
  - Davis agreed and noted that NYS DEC should be contacted first.
- **Action:** State representatives should contact Rachel Soobitsky if they have any suggestions following the local data gathering presentation.
- Berger asked when the next local data call will be.
  - Claggett: There are multiple calls for various data. Since sewer and MS4 will inform milestone updates, the call may be in January 2021.
  - Goulet noted that MS4s will not change until 2020 census is released. There will most likely not be updates by January 2021.
  - Claggett: We plan on the Conservancy leading data calls for the next 5 years in the geospatial award.

- o   Soobitsky: The next call may be in 2022 or 2023 so it matches up with NAIP data.
- o   **Action:** A timeline will be developed to visualize the timing of local data calls for the next several years.
- o   Soobitsky noted that in the next local data call they will include an attachment with data set definitions, how data is used, and why. They also may do a webinar series to discuss this topic further.

Priority Areas for Mapping High-Resolution Hydrography (20 min) – D. Saavedra, CIC
- Saavedra presented potential priority areas for developing high-resolution hydrography data.
- The LUWG will be asked to comment on these priorities and suggest additional ones. These data will be produced for the entire Bay watershed over the next 2-3 years, the questions are which areas should be mapped first and why.
- Claggett noted we hope to have wall-to-wall high-resolution land cover by summer of 2020. We will spend 1 year translating this into wall-to-wall land use by summer of 2021.
- Martin: I recommend the Shenandoah area since livestock exclusion is a major BMP in our VA WIP. Currently, we don't have an accurate representation of how much is left to be done.
- **Decision:** The LUWG recommends prioritizing the Choptank and Shenandoah as priority areas for mapping high-resolution hydrography. If there are further recommendations, please email the group.
- Claggett noted that the lower Susquehanna data will be released in the next couple months. A priority list will be developed from input from the LUWG and others. The Stream Health Workgroup and Healthy Watersheds GIT may be others.
- Claggett noted that UVM is prioritizing forests in MD, therefore MD is starting out this process. Then we will move forward on the HUC basis.
- **Action:** At a future meeting, CIC will present a prioritized list of HUCs to map high-resolution hydrography. The LUWG can review and edit this list based on workgroup priorities.
- Soobitsky noted that Lidar data may be the deciding factor instead of our priorities.
- Montali noted that the South Branch in WV may be an interesting area to map hydrography due to extensive berm work.

Land Use Methods and Metrics Outcome Progress (40 min) – P. Claggett, USGS; S. McDonald, USGS; R. Soobitsky, CIC.
- Progress on the land use methods and metrics outcome
- o   Thompson noted that that the land use options and evaluation SRS documents are still being developed and therefore the land use methods and metrics documents are not yet approved.
- Claggett noted that land cover changes for 2001-2016 based on NLCD were developed over the summer by a CRC-summer intern for the entire Bay watershed

- McDonald presented work with LCMAP data, detecting land change from 1985-2017 at 30 m resolution. McDonald showed how the data can be used to map deforestation, afforestation, and timber harvest activities.
- Filippino noted that this could be used as an application for climate change down the road.
- Soobitsky went over tree canopy change methodology comparisons, NLCD (30m) vs wall-to-wall (1m) vs Hot Spot LCMAP change (1m w/in 30m hot spot) in Anne Arundel County, Maryland
- Filippino asked if there will there be an accuracy assessment to compare these methods better
  - Soobitsky noted that they plan to do an accuracy assessment. We also plan to look into errors in 2013 NLCD data as well.
- Berger: It would be helpful when the hotspot data is final to have an insights report explaining the inferences and to provide context and accuracy estimates.
- Claggett noted that analysis tells us that hotspots have the potential of underestimating by 10-fold. We don't have the capacity to perform an accuracy assessment with 10,000 points of field verification. The small changes add up and may be as important as the large areas of change to water quality and habitat.
- Martin: Has the hotspot change detection been compared to the 30 m change detection been completed for classifications other than tree canopy?
  - Claggett: I can explore that more to explain those differences.
  - Martin: If that data could be made available, there are other bodies that can look into that question as well.
  - Claggett: The NLCD data is available to anyone to download and we can discuss where the hotspot analysis can be posted for others to access and do their own analysis.

Chesapeake Bay Land Change Model (45 min) – K. Berger, MWCOG; P. Claggett, USGS
- Discussion of current status, applications, needs, and future enhancements
- Evolution of CBLCM (versions 1-4)
- Planned improvements and added functionality of CBLCM version 5
- The LUWG will be asked to help prioritize functionality enhancements
- CBLCM developing since 2010 and evolved to designing and coding from scratch which is what we currently use independent from other models. Eventually it will be run in the cloud and people can run different scenarios and we can't run them all here for the jurisdictions.
- **Action:** Please send feedback on the CBLCM future functionality slide (slide 6, CBLCM Future Functionality Presentation).

Planning Next Meeting, News, Updates (15 min) – K. Berger, MWCOG
Topics for next meeting, and meeting wrap up.

Next 2-hour calls: October 2nd and/or November 6th

- Agenda topics include an update on use of milestones with more context and feedback on decision rules.

Next face-to-face meeting: December 4th, 2019

Meeting Participants:
Karl Berger, MWCOG
Peter Claggett, USGS
Allie Wagner, CRC
Renee Thompson, USGS
Cassandra Davis, NYS DEC
Travis Stoe, PA DEP
Chad Thompson, WV DEP
Dave Montali, WV DEP
Shannon McKenrick, MDE
Nicole Christ, MDE
Lori Brown, DNREC
James Martin, VA DEQ
Ariana Johns, VA DEQ
Mark Symborski, Montgomery Co, MD
Jennifer Miller-Herzog, Land Trust Alliance
Erik Fisher, CBF
Norm Goulet, Nova Regional Commission
Deb Sward, MDP
KC Filippino, Hampton Roads PDC
Rachel Soobitsky, Chesapeake Conservancy
John Griffin, Chesapeake Conservation Partnership
Jessica Elliott, Chesapeake Conservation Corps
Labeeb Ahmed, Attain
David Saavedra, Chesapeake Conservancy
Susan Minnemeyer, Chesapeake Conservancy
Sarah McDonald, USGS student contractor
Fred Irani, USGS