

CHESAPEAKE BAY PROGRAM LAND USE WORKGROUP

Call Summary
July 6, 2016
10:00AM-12:00PM

Meeting Materials: <http://www.chesapeakebay.net/calendar/event/23313/>

Actions and Decisions:

ACTION: Peter Claggett will work with the Chesapeake Conservancy and UVM land cover contractors in order to develop a briefing document that summarizes the process and outcomes of their local review process.

ACTION: Mark Symborski will inquire about finding GIS analysts to verify and ground truth the back-casting model outputs against historical aerial imagery. Stephanie Martins and Jeff White will coordinate with Peter Claggett to try and identify additional help on this verification. Other LUWG members and interested parties should contact Peter Claggett if they would like to provide additional assistance on this effort.

DECISION: The LUWG agreed to hold a peer review of the results of the land change model, and agreed to the proposed questions for a STAC peer review of the back-casting methodology. The LUWG also agreed to propose that STAC conduct a review of the Phase 6 land use methodology. If LUWG members or interested parties have suggested edits to the proposed questions for the STAC reviewer, they should send their comments to Peter Claggett (pclagget@chesapeakebay.net) by no later than COB Friday, July 8.

ACTION: Peter Claggett will draft a summary document outlining the land use issues related to the Urban Tree Planting BMP, and possible methods that could be used to ensure regular detection and validation of that detection. Peter will also coordinate with Jeff Sweeney to identify other BMPs that could be impacted with regular land use data updates.

DECISION: The LUWG recommended an appropriate time-step be used in collecting new high resolution land use data to monitor the Urban Tree Planting BMP, and conducting some type of validation analysis on the data as it is captured and tracked in the high res data. This would be completed after the Phase 6 model is finished, likely in early 2017.

Welcome and introductions/Review of meeting minutes – K. Berger, MWCOG

- Minutes from the May 4th conference call were approved.

Update on Phase 6 Land Use Database – F. Irani, USGS

- Fred updated the LUWG on the status and progress made in finalizing the Phase 6 land use model. Additional information is available in his [presentation](#), posted online to the calendar event page. All of the land cover data is expected to be delivered to the CBP Land Data Team by the end of July, after which the local review of the land use data will begin.
- Regarding the local review, the LUWG initially agreed to a 4-week review timeframe. The Management Board discussed the possibility of a 6-week review process, and the workgroup should note that the original 4-week review timeframe is still the designated review period for the local counties. As of this meeting, no counties within the Bay watershed have gone through the review of their local land use data.
- Darold Burdick: Could local counties download the delivered land cover data?
 - Peter Claggett: We will try and make that data available as much as possible.
 - Norm Goulet will coordinate with Darold to provide access to the land cover data to Virginia localities.
- Karl Berger: Were there any significant concerns or issues that arose out of local government review of the consultants' land cover data?
 - Fred Irani: You'd have to coordinate with the project leads from the Conservancy and UVM.
 - Peter Claggett: I know Maryland has been very vocal on their land use data, and have been identifying and notifying the contractors of some issues.
 - Mark Symborski: Our GIS folks had concerns about areas that were being considered impervious that were not, at least in Montgomery County.
 - Stephanie Martins: I recall they tried to incorporate some better local information to address some of the issues where they could. I haven't seen any adjusted data since we worked with local jurisdictions to provide those comments.
 - Shannon McKenrick: The Conservancy has been working with us, and has made a number of changes based on comments put forward by counties. To my knowledge, we have had difficulties in getting that revised data.
- Request from West Virginia for the land cover contractors to include state representatives in the local review process.
- Karl Berger asked the LUWG if they still feel comfortable with a 4-week review process. Group generally agreed that 4 weeks is sufficient.
 - WV DEP noted that 4 weeks seems appropriate, but has reservations in case the data needs significant revising.
- Request to notify state representatives of the review schedule and timeline for their local jurisdictions in advance of the start of the review period.

ACTION: Peter Claggett will work with the Chesapeake Conservancy and UVM land cover contractors and report back to the workgroup on the local government review of high resolution land cover data.

Update on Back/Fore casting Peer Review Process – P. Claggett, USGS

- Peter briefed the workgroup on the proposed STAC review of the Phase 6 land use backcasting methodology. He noted that the forecasting methodology already is being reviewed via the journal peer review process and by EPA's Office of Research and Development. He presented proposed questions for the STAC reviewers, as well as the qualifications needed to do the review. Additional information is available in his [presentation](#), posted on the calendar event page.
- The LUWG will be focused on reviewing the results and scenarios from the land change model, not necessarily to review the methodology of the forecasting model.
- Karl Berger requested that the 2025 forecasting process be reviewed at the September LUWG meeting.
- Lee Epstein: Will the LUWG have an opportunity to weigh in on how the 2025 future forecasts will be used in connection with TMDL decision-making?
 - Peter Claggett: My sense is that we should weigh in as a workgroup; however, the decision is likely to be made at the GIT-level. The LUWG could make a recommendation on the legitimacy of the forecasts in terms of decision-making.
- Bill Keeling asked whether back-casted land use would be available for each land use through time.
 - Peter Claggett: We'll have to aggregate some of that information, so it won't be as fine-scale as the land use data. Other land use classes will have to be deferred to the ag census with a static spatial representation.
- Mark Symborski suggested checking how the backcasting method works by using historical aerial photos to ground truth the method's results.
 - Peter Claggett: There are ways to do it. We hope to accomplish this with the LUWG's participation
 - Mark Symborski will see if Montgomery County has data that could be used for historical verification.
- Concerns were raised on the back-casting methodology missing small clumps of trees and forested buffer zone change that may not be detected by the 30 m Landsat data.
- Peter recommended to the LUWG that it ask STAC to review the overall Phase 6 land use methodology in addition to the back-casting methodology.
- Karl Berger noted that there is a STAC review that will cover the entire Phase 6 model – watershed model, etc.
- Peter Claggett raised issues of when the STAC review would occur, while still ensuring that the Phase 6 land use data in addition to the back/fore-casted results are delivered to the partnership by December. Peter proposed a review of the back-casting methodology in Spring 2017, when the partnership reviews the entire model.

ACTION: Mark Symborski will check whether Montgomery County has data and analysis capabilities to ground truth the back-casting methods against historical aerial imagery. Stephanie Martins and Jeff White will coordinate with Peter Claggett to try and identify additional help on this verification. Other LUWG members and interested parties should contact Peter Claggett if they would like to provide additional assistance on this effort.

DECISION: The LUWG agreed to recommend a peer review of the overall Phase 6 land use methodology and the backcasting methods (but not the forecasting methods).. If LUWG members or interested parties have suggested edits to the proposed questions for the STAC reviewer, they should send their comments to Peter Claggett (pclagget@chesapeakebay.net) by no later than COB Friday, July 8.

Update on Forestry Workgroup's Proposed Tree Planting BMP – J. Hanson, VT

- Jeremy updated the LUWG on the relationship between the new tree planting BMPs and land use/land cover updates. Additional information can be found in his [presentation](#), posted to the calendar event page.
- Credit for the tree planting will be captured initially as a BMP in Scenario Builder; once the planted trees are detectable in the high resolution land cover, the BMP credit will sunset.
- Peter Claggett: The Management Board advised that the high resolution land cover be updated every 3 years. I have advised the partners that it is more practical to do it every 4-5 years. The plan is that the watershed would be completely re-mapped, with a revised change detection back to 2013 and a re-mapped 2013. Every time we update the data, there will be a new land use - land cover dataset and historical record.
- Concerns were raised about having to re-calibrate the model every time the land use data is updated. Jeff Sweeney noted that there are ways to update the data without having to recalibrate the model. He also reminded the group that there will be updates made to the model post-calibration. If there is something that would be added that could influence the calibration, there are alternative methods available.
- Norm Goulet advised the LUWG communicate to the partnership that in order for the BMP to work, it is contingent on regular updates of the land cover land use data.
- Questions and concerns were raised about whether the planting of trees will allow for the conversion of turf to mixed open, dependent upon the time-step of land use updates. Additional concerns were raised about how the BMP will be tracked in the milestones.
- Peter Claggett recommended that when the first update to the high resolution land cover - land use data is done, the Bay Program should conduct a validation of the time it takes to detect newly planted trees as either forest or tree canopy.
- Jeff Sweeney suggested doing a validation sooner than this using Maryland data, which includes lat/long coordinates of the tree plantings -- to see when the high resolution data detects the reported tree planting and to validate some of the assumptions related to the BMP.
- The Virginia representative requested the program do an aerial photo validation and use 3-6 inch high resolution imagery in order to conduct the tree planting BMP validation.

ACTION: Peter Claggett will draft a summary document outlining the land use issues related to the Urban Tree Planting BMP, and possible methods that could be used to validate the BMP's longevity parameters. Peter will also coordinate with Jeff Sweeney to identify other BMPs that could be impacted by regular land use data updates.

DECISION: The LUWG recommended that the time interval between updates of the high resolution land use data be coordinated with the longevity parameters of the Urban Tree Planting BMP, and that a validation analysis on the detection capabilities of the high resolution data be conducted. This would be completed after the Phase 6 model is finished, likely in early 2017.

Fractional land uses for Phase 6 – P. Claggett, USGS

- Peter noted that there are two fractional land uses that are being mapped using local land use and parcel data. The GIS team is focusing on mapping the data that will be covered in the fractional model, but does not have final numeric fractions at this time.
- The LUWG will be able to make a formal recommendation and decision on the numeric values to be used in the fractional model during the September face-to-face meeting.

Discussion of September LUWG Face-to-Face Agenda – All

- Proposed agenda topics for the September LUWG meeting are as follows:
- Update on fractional model and numeric values.
- Update on production of Phase 6 land use.
 - Request for update on how the local review is going.
- Discussion of land change forecasts, with sample back-casting and fore-casting methodology results.
- Request for local jurisdiction representatives to participate in this meeting if they have already reviewed their land use data.
- Briefing of Virginia process for how their land cover will be incorporated into the model.

Adjourn

Next Meeting: Wednesday, September 7th Face-to-Face at CBP Offices

Participants:

Name	Affiliation
Peter Claggett	USGS LUWG Coordinator
Karl Berger	MWCOG LUWG Chair
Lindsey Gordon	CRC
Samantha Wood	UMD
Skyler Golt	UMD
David Newburn	UMD
Jeff Sweeney	EPA
Tyler Monteith	DNREC
Jonathan Champion	DC DOEE
Shannon McKenrick	MDE

Stephanie Martins	MDP
Mark Symborski	Montgomery County Planning Department
Paul Patnode	M-NCPPC PG County
Ted Tesler	PA DEP
Bill Keeling	VA DEQ
Dennis Cumbie	Loudon County, VA
Darold Burdick	Fairfax County, VA
Norm Goulet	NVRC
Justin Shafer	Norfolk
Sebastian Donner	WV DEP
Renee Thompson	USGS
Lee Epstein	CBF
Natalie Gardner	STAC Coordinator, CRC