Conference Call Meeting Minutes
October 7th, 2020
1:00 PM – 3:00 PM

Summary of Actions & Decisions

- **DECISION:** The Land Use Workgroup approved September's meeting minutes.
- **DECISION:** The Land Use Workgroup *tentatively* approved the timeline for land use data production. If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.
  - **Comments from PA DEP:**
    - Please continue to work with Lisa Beatty (elbeatty@pa.gov) to assist counties with providing feedback for the land cover data.
    - Please consider that COVID-19 may have possible different shut downs from county to county based on PA's Governor direction that could affect the timing of deliverables to this project.
- **DECISION:** The Land Use Workgroup *tentatively* approved the decision to incorporate LiDAR-derived streams and updated land cover where recent and high-quality LiDAR data are available into the 2017 and 2013 land use datasets for CAST21. For counties lacking adequate LiDAR, the stream data used in CAST-19 will be used again in CAST-21 for those counties. If data quality issues prevent the development of 2017 land cover/use in one or more counties, land uses will be interpolated between 2013 – 2025, rather than between 2017-2025 for those counties. If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.
  - **Comments from PA DEP:**
    - Please continue to work with Travis Stoe (tstoe@pa.gov) to obtain this data.
    - Please check in with Eric Jespersen (EJespersen@jmttg.com) for updates on the progress of LiDAR-derived stream data.
    - Please consider that COVID-19 may have possible different shut downs from county to county based on PA's Governor direction that could affect the timing of deliverables to this project.
- **DECISION:** The Land Use Workgroup *tentatively* approved the following logic for classifying Suspended Succession Roadside. If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.
  - Step 1: Use small parcel logic
  - Step 2: Check Small Segments
    - Check no existing land use
    - Land cover = Low Vegetation
    - Segment area <= 50 m²
    - Low vegetation segment touches road segment
  - Step 3: Large segment agriculture logic
  - Step 4: Revisit larger segments
    - Check no existing land use
    - Land Cover = "Low Vegetation"

- Segment area <=1,000 m²
- Low vegetation segment touches road segment

- **DECISION:** The LUWG *tentatively* decided that bare shore will be mapped as barren lands that are adjacent water but not wetlands. If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.
- **DECISION:** The LUWG *tentatively* decided that Solar fields will be classified as Solar impervious, Solar scrub-shrub, Solar barren, and Solar herbaceous. If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.
  - **Questions from PA DEP:**
    - What is the method to determine between the Solar impervious, Solar scrub-shrub, Solar barren, and Solar herbaceous?
      - Peter Claggett's (USGS) Comments: Solar fields will be mapped using state databases (where available) complemented by image pattern recognition (aka Artificial Intelligence, "AI") to detect clusters of raised panels. When mapped by states or counties as polygons, the visible, non-tree pervious portions of the solar field polygon will be classed based on their land cover type (e.g., solar herbaceous, solar barren, and solar herbaceous). The panels will always be mapped as solar impervious. For solar fields identified with AI, rather than polygons, the panels will be mapped as solar impervious and the pervious portions within a yet-to-be-defined buffer of the panels will be mapped as per their land cover class as mentioned above. AI can only detect the panels.
    - Is there a difference in loading rates between the classes of Solar impervious, Solar scrub-shrub, Solar barren, and Solar herbaceous?
      - Peter Claggett's (USGS) Comments: Not that we yet know of. There is evidence, however, that the panels do not function hydrologically like a parking lot and that the pervious portions do not function like cropland. At the January LUWG meeting, the roll up of the 60+ land uses to the 13 Phase 6 land uses will be discussed. One possibility is to class the pervious portions as "suspended succession" and the impervious portions (the panels) as solar impervious. All of these classes could roll up to "mixed open" in the Phase 6 model meaning they would load similar to forests or they could roll up as non-road impervious and turf grass which load at higher rates than mixed open.

1:00 Welcome, Roll Call, Review of meeting minutes, Action Item Update – KC Filippino, Hampton Roads Planning District Commission

DECISION: The Land Use Workgroup approved September's meeting minutes.

1:10 Status on updates to High-res Land Cover Data – R. Soobitsky, Conservation Innovation Center - Chesapeake Conservancy
Rachel provided an update on the status of the 2017 high-res land cover data production and review process and discussed the comments received to date from local jurisdictions. Primarily systematic errors have been found and are being addressed. The Conservancy is keeping a list

of these errors and will report out on common themes at the end of the process. Positive feedback for this process was received and will be helpful for future efforts. Rachel noted that a number of Pennsylvania counties are due to review the land cover data and the Conservancy is working closely with Pennsylvania DEP officials on coordinating their response.

1:20   [Status of Hyper-res Hydrography production](#) – D. Saavedra, Conservation Innovation Center - Chesapeake Conservancy
David provided an update on the status of hyper-res hydrography data production and review. They are finishing up the Lower Susquehanna and will do a watershed in Virginia next. A question was asked if there was any manual classification that was field checked, David responded that they are using machine learning at the moment and haven't done any field checking.

1:30   [Land use Production Schedule and Consequences of Missing LiDAR imagery](#) - P. Claggett
Peter led a discussion on the timeline for the land use data production. June 30th, 2021 is the deadline for clean data so all approvals must be finalized prior to that. Peter also requested a discussion on how to proceed with CAST-21 if LiDAR data are missing or outdated for one or more counties. There are parts of PA and VA that are missing data and efforts are underway to obtain data for PA. It must be collected by January in order to be included in PA. A drop-dead date of April 2021 is acceptable for VA and maybe PA depending on the quality of the data. Peter noted that any new data not submitted or processed in time for inclusion in 2021 CAST will be included in the next version of the model (2023 CAST).

DECISION: With some minor adjustments to the schedule**,** the Land Use Workgroup *tentatively* approved the timeline for land use data production. If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.

DECISION: The Land Use Workgroup *tentatively* approved the decision to incorporate LiDAR-derived streams and updated land cover where recent and high-quality LiDAR data are available into the 2017 and 2013 land use datasets for CAST21. For counties lacking adequate LiDAR, the stream data used in CAST-19 will be used again in CAST-21 for those counties. If data quality issues prevent the development of 2017 land cover/use in one or more counties, land uses will be interpolated between 2013 – 2025, rather than between 2017-2025 for those counties. If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.

1:45   [Mapping Cropland, Pasture, Orchards, Fallow, Suspended Succession, Bare Shore, and Solar Fields.](#) – J. Czawlytko, Conservation Innovation Center - Chesapeake Conservancy
Jacob discussed and demonstrated methods for mapping suspended sucession, bare shore, and solar field land uses and solicited feedback on the methodology. He will have a further discussion with the Agriculture Workgroup on the cropland, pasture, orchards, and fallow land uses on October 15th. While approvals for bare shore was straightforward, there was a lot of discussion about the land use around solar fields (outside of the actual impervious footprint). Although turfgrass may be the most common such land use, members noted that other land

uses, such as agriculture sometime underlie solar panels. It was determined that more data and information is needed to determine this land use, so, for now, it will stay as is, which is a mix of impervious, scrub-shrub, barren, and herbaceous. The methods for mapping suspended succession were complex and not yet complete. Suspended succession will be revisited at the November meeting along with a request for tentative approval of the agricultural land use mapping methods following presentation of those methods to the Agricultural Workgroup on October 15th.

- **DECISION:** The LUWG *tentatively* decided that bare shore will be mapped as barren lands that are adjacent water but not wetlands. . If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.

- **DECISION:** The LUWG *tentatively* decided that Solar fields will be classified as Solar impervious, Solar scrub-shrub, Solar barren, and Solar herbaceous. If there are no fatal flaw issues raised by the LUWG members within the 7-day timeframe, the decision will be approved.

2:30   Agricultural Forecasting - P. Claggett, U.S. Geological Survey
Due to time constraints, Peter will be discussing a new approach for forecasting agriculture at the next Agriculture Workgroup meeting.
If members are interested in hearing the presentation and discussion with the AgWG, please attend the AgWG meeting on October 15th from 10:00 – 12:00 pm. The call-in information and agenda can be found on the calendar page.

2:50   Wrap-up/Upcoming Meeting Schedule – KC Filippino, Hampton Roads Planning District Commission
The next meeting of the Land Use Workgroup will be November 4th, 2020, 1-3pm. We will be discussing decision rules for bare construction and provide follow-up and have decisions on the agricultural-related land use classifications. The Dec. 2nd meeting will be a joint meeting between the LUWG and the Forestry Workgroup.

3:00   Adjourn

Next meetings (call):
Land Use Workgroup Meeting, November 4th, 2020 from 1:00pm to 3:00pm
Land Use Workgroup and Forestry Workgroup Joint Meeting, December 2nd, 2020 (time TBD)

Participants
KC Filippino, HRPDC
Karl Berger, MWCOG
Peter Claggett, USGS CBPO
Whitney Ashead, CRC
Alana Hartman, WV
Arianna Johns, VA DEQ

Cassandra Davis, NYSDEC
David Saavedra, CIC
Erik Fisher, CBF
Jacob Czawkykto, CIC
Jeremey Hanson, VT
Ken Choi, MD Dept. of Planning
Lisa Beatty, PA DEP
Nicole Christ, MDE
Rachel Soobitsky, CIC
Sarah McDonald
Travis Stoe, PA DEP
Deborah Sward, MD Dept. of Planning
Labeeb Ahmed, EPA
Renee Thompson, USGS CBPO
Ted Tessler, PA DEP
Lori Brown, DNREC
Shannon McKenrick, MDE
Lee Epstein, CBF
Mark Dubin, UMD
Allie Wagner, NVRC
David Allen Newburn, UMD
Vanessa Van Note, EPA
Norm Goulet, NVRC