Land Use Workgroup Minutes
September 17th, 2012
http://www.chesapeakebay.net/calendar/event/18602/

Action Items & Decisions

MEETING NOTE: Conference line malfunction; remote participants were not audible via the Polycom system, but could hear the meeting discussion. These participants were encouraged to submit comments and questions through the Adobe Connect chat function.

ACTION: Jenny Tribo and Karl Berger will work with Peter Claggett to revise LUWG primary role/responsibilities number 5 "Monitor and report local land use changes corresponding to 2-year milestone assessments." Revisions to this role/responsibility will be presented for LUWG review during next conference call.

DECISION: Secondary LUWG role/responsibilities number one language will be changed to "Increase the accuracy of estimated populations on sewer and septic used to inform CBP models."

ACTION: LUWG members to send Molly Harrington and Peter Claggett suggestions of future LUWG presentations and speakers.

ACTION: LUWG midpoint assessment priorities document will be sent to LUWG for review prior to submission to the WQGIT.

ACTION: Jurisdictions and localities with land use models, tools, and projections to provide information to Molly Harrington with contact information for future LUWG presentations.

ACTION: Any changes to LUWG membership list should be sent to Molly Harrington.

Minutes

Welcome and Introductions – Jenny Tribo and Karl Berger, Co-Chairs

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- **Berger:** Land Use Workgroup (LUWG) membership and meetings
  - Over 40 nominations received, few declined to participate. Currently, LUWG one of the larger workgroups, but final numbers of participants remains to be seen.
    - See Nominated LUWG Members and Interested Parties List
    - Smaller subgroups may coalesce depending on a particular meeting topic.
      - E.g. agricultural land use issues.
  - Anticipate most meetings to be teleconferences with occasional face-to-face meetings.
  - Proposed meeting schedule of the third Monday of each month.
    - Few conflicts with other Chesapeake Bay Program (CBP) reoccurring meetings.
    - Members to recommend number of face-to-face meetings needed.
- **Tribo:** First meeting of this workgroup. Will focus on background information, potential topics to address, prioritization of issues, and establishment of LUWG charge.

Land Use Data in Chesapeake Bay Watershed Model – Gary Shenk

- See presentation: Land Use in the Chesapeake Bay Program Partnership's Watershed Model
- **Lewis:** If more specific, accurate data becomes available, can this be modified mid-stream in the model (e.g., more accurate data on MD manure generation that will be available)? Will this data not be incorporated until 2017 midpoint assessment?

- **Shenk:** This question refers to what is measured with Watershed Model (WSM)- different from land use. Attempting to measure changes on the ground, not changes in data.
    - If new data can be used to estimate change from 2005 until now, CBP would like to include in the CBP model.
    - For LUWG, this group must determine creation of new land use for 2017 to capture differences/specifics of practices or keep landuse groups together.

- **Berger:** CBP organized though workgroups which deal with specific sector issues.
    - No clear distinction between land use and other workgroups. Need to note correlation with other workgroups; identify issues for LUWG, other workgroups, or collaborative efforts.
- **Hall:** DE has created own localized land use model. How can data that is captured in DE local model and DE scenarios be linked to the WSM?
    - **Shenk:** Does DE model simulate change in land use or change in load?
        - **Hall:** Model of land use change, built around densities and density allocation. From densities, other factors (future roads needed, costs, loading) are calculated.
            - Based on limited number of land use classifications.
            - Initial study used 2007 land use land cover DE data. More limited financial resources now; therefore, unlikely to be updated by DE.
    - **Hall:** How can this information from the DE model be used in the WSM?
        - **Shenk:** Seems like DE model is being used for many purposes.
            - Both models are doing many different things and have overlap. Both take a set of management actions on the ground and evaluate the effect of those actions.
            - If a goal is set using one model, the evaluation of progress towards the goal must be made using the same model. Opinion: always use the model on which the goals were set.
    - **Hall:** On path to utilize an ARC based platform, running off of CommunityViz as a tag. Want to be sure that implementation of recommendations will be credited come 2017.
        - **Shenk:** However, anyone can create a model to produce desired results. Therefore, must evaluate goals using model that the goals were set on.
    - **Goulet:** Hall's point has been expressed in the past and is coming to a head with the 2017 midpoint assessment.
        - We have Phase 5.3.2 and are expecting to develop Phase 6 of the model. These are large-scale basin drilled down to a regional level model.
        - Realization that we need another tool for locality-based compliance/evaluation.
        - **Shenk:** Understands the problem and has seen how people are trying to fill this gap with their own models. Partnership needs to discuss path forward.
            - Concern regarding equity of two different localities/states with different models and results.
        - **Hall:** Not talking about rewriting coefficients or BMP efficiencies. If this data is provided, that is what will be factored into local DE model. Question is how to share local results from DE model?
    - **Claggett:** This issues addressed primary reason for formation of LUWG – how to integrate, and to what extent, local information into the suite of models.
        - This workgroup will evaluate regional approaches (compare states' approached) for consistency and equity.
            - Push back against local information due to concern over equity issues.
- **Berger:** Notes draft mission statement.

- Issue of CBP relying solely on WSM. Is the accounting system separate from WSM? How to bring local land use data to bear regardless of evolving accounting/scenario estimation systems?
- **Shenk:** Concurs. Resistance to local data has been due to equity issues.
  - Going through TMDL and WIP process has indicated the importance of local land use data. Very clear that local datasets must be incorporated in a consistent way.
    - Difficult task for a workgroup to tackle, but number of participants in new LUWG is telling of the task's importance.

- **Tesler:** Shenk mentioned the need for consistent land use over time. Elaborate on why and how confining?
  - **Shenk:** For example, if satellite data from one time period is used and an on-the-ground evaluation is conducted at another time period, inaccurate conclusions would be reached. Consistency through time is necessary.
    - Does not mean that only data sets with a 1985-2005 temporal extent can be used. We can use a land use estimate from a single point in time combined with trend estimates from another source to construct a consistent data set.
  - **Tesler:** Therefore, not so much to be able to offer 1985 baseline, but trending and change.
    - **Shenk:** Yes, WSM measures changes in management.

Past Methods of Modeling Land Use Data – Peter Claggett

- See presentation: Past Methods of Modeling Land Use Data
- **Rodgers:** How does the model accommodate stormwater management, or the lack thereof, in impervious surface?
  - Theoretically, since 1984 developments have been implementing stormwater management practices. Is this factored in somehow or is all impervious surface considered to be unmanaged?
  - **Shenk:** Claggett provides estimates of how much impervious surface there is and the characteristic of the impervious surface determines load.
    - Characteristics determined by BMP information provided by states and scientific review to determine effectiveness of BMPs in load reductions.
  - **Sweeney:** Particular states have certain effectiveness by era of when stormwater BMP was implemented.
    - **Shenk:** For purpose of this workgroup, better estimates of the impact of age would be great because that affects estimates of load and progress.
    - **Sweeney:** Moving forward, the Urban Stormwater Workgroup is trying to quantify and track BMPs that meet a certain performance standard. This would be the preferable means for submitting implementation data.
  - **White:** Currently, who provides this information?
    - **Sweeney:** One contact/state (usually from the state environmental agency) gathers the information from multiple in-state sources.
  - **Baldwin:** Does that state agency also provide BMP effectiveness rates?
    - **Sweeney:** Effectiveness is determined by CBP Expert Panels composed of stakeholders and academics. BMP reviews are typically proposed by state agencies.
    - **Baldwin:** So what information is provided by states?
      - **Sweeney:** Stormwater by era, 1985-2002. The stormwater by era approach is only approved for MD at this point.

- **Evans:** Slide 14 compared land use data derived by the CBP vs. MD for a particular area. More urban area shown with MD data and the difference could be attributed to the use of high altitude aerial photography.
    - Was high altitude photography used to refine any datasets from 1984-2006? If not, could it used now to upgrade information from those periods?
    - **Claggett:** Satellite data from 1984-2006 stand alone; didn't use aerial photography information in that process for developing those datasets.
        - Aerial photography was used to make some edits to the 1984-2006 land cover data series used in Phase 5.3.0, but only in areas where potential misclassifications were identified (e.g, an area appearing to transition from developed to open water). Aerial photography was used as ancillary information in development Phase 5.3.2 land use dataset (used to sample road widths for major road types, etc).
            - MD parcel point data also used to average how big a rural residential lot.
        - Satellite data used almost exclusively to represent urban areas, as it captures that information well. Outside of that, areas of high road densities were used to represent subdivisions that the satellite probably missed.
        - In areas considered fairly rural with low road densities, we estimated the number of detached housing units from census information and multiplied by average rural lot size and sampled estimates of impervious surface per lot.
- **Evans:** In PA, reorganized land use map to contain six urban categories by manual interpreted data. Increased accuracy of low density representation.
    - **Claggett:** All options are on the table, but limited financial resources must be recognized. Need to determine and communicate importance of proposed efforts to receive more funding.
- **Goulet:** Were MD derivations (e.g., mean rural residential lot size) carried over to the other states or was this used in MD only?
    - **Claggett:** This was carried over to all the states because data from the whole state was available, covering the spectrum from rural to developed counties. This information was not available from other states.
- **Berger:** Some slides suggest the possibility of using different data sources in an area to refine land use. However, this information is likely unavailable for the entire watershed.
    - Shenk's emphasis on the need for a method used for past, current, and future land used. Spatially, good data may be available in certain areas, but not for entire watershed.
    - Consistency of data throughout the watershed? Will we end up with different data methodology or just different data? How uniformly applied?
    - **Claggett:** The average rural lot size parameter derived from MD data was used across watershed. But, to determine impervious surface within rural lots, aerial photography used to sample all states and develop coefficients.
        - Therefore, if data is not available for entire watershed, different solutions can be used.
            - Approach 1: Cross-walk data. E.g., take DE's land use data for whole state and cross-walk with CBP land uses, then accept carte blanche.
            - Approach 2: variable land use data in different parts of the state can be correlated with satellite data to extrapolate across the region. Sampling in different jurisdictions or rural/suburban/urban areas can help to develop coefficient-based approach.
        - Variety of ways local information can be used, even if it cannot be accepted as is, to build the land use dataset.

- **Stewart:** Noticed that redevelopment/revitalization was not identified, but densification was. Many local jurisdictions are refocusing efforts in development plans to revitalization. In the process of doing so, are making water quality improvements due stormwater management.
    - Are redevelopment trends being identified?
    - **Claggett:** We are trying to through infill/redevelopment simulation.
        - Currently, approach uses national data to estimate. Compare no-change satellite data to census data to identify potential redevelopment or infill.
        - Looking for groundtruth data: local data that shows where redevelopment and infill has occurred in the past? Can states provide this information in order to build model to represent infill?
- **Keeling:** Septic systems are not a load to the land surface or the groundwater, but a direct discharge assumed to be in reasonable working order. Loads from failing systems are not explicitly accounted for.
    - VA Dept of Health believes business septic systems are missed (estimates 100,250 systems missed). Not just residences need to be captured.

2017 Midpoint Assessment Process – Katherine Antos

- See presentation: 2017 Midpoint Assessment Process
- See additional materials: Midpoint Assessment Guiding Principles Draft (09.10.12), Summarized Input on Land Use Midpoint Assessment Topics, Verbatim Input on Land Use Midpoint Assessment Topics
- **Gattis:** Per verbatim input document, does not see input on land use from PA. Due to PA organization, it is difficult to compile input on midpoint assessment into succinctly.
    - **Tesler:** This input was provided but may have been put elsewhere in the full, 32 page verbatim input document.
        - Had submitted general input regarding the size of the segments and other modeling related issues.
    - **Antos:** Any topics that LUWG members feel are missing, please raise issues now to include in top LUWG priorities.

Review of LUWG Charge and Proposed Priorities – Berger and Tribo

- See presentation: LUWG Mission and Roles Presentation
- See document: LUWG Draft Mission and Roles Document
- **Tribo:** Note on slide 3, this is a draft mission statement that is open to revisions by the LUWG. Do any members propose changes to the mission statement?
    - **Tesler:** Has reservations regarding how to measure success in terms of local data. How to quantify how local the local data is?
        - **Berger:** Believes this doesn't suggest if data is local in origin, but if data is locally credible.
            - Emphasizes different levels of data specificity.
- **Tesler:** Also, while NAS report is important to CBP and is driving verification work, keep priorities in mind with efficiencies. Often missing the importance of land use.
    - When a loading rate is assigned to a large area vs. the effort to evaluate a few BMPs in a sector, seems that effort is much better spent on land use.
- **Quinlan:** Concern regarding role number 5 on slide 4: "Monitor and report local land use changes corresponding to 2-year milestone assessments."
    - **Claggett:** All states report BMPs for two-year milestones, but then changes in BMPs need to be compared to changes in land use.
    - **Quinlan:** VA has a system to track BMPs, not local-scale land use changes.

        - **Claggett:** Right. This identifies a gap or issue to be addressed. LUWG to determine how to address.
    - **Claggett:** Currently taking generalized projections developed by Land Use Data Team and applying them out to 2017 and 2025. These are linearly interpolated to line up with two-year milestone.
        - However, two-year change varies greatly; therefore, a linear interpolation of a 5, 15, or 20 year trend does not match up with actual changes.
        - Problematic that actual BMPs matched with assumed land use change. Feels this is deficient and may be something to explore for jurisdictions that do have the information.
            - For jurisdictions that do not have that information, improvement of models and general estimates for local credibility important.
    - **Keeling:** Except this is a mischaracterization. Milestones do not report what happened, but develop a scenario of planned implementation over the next two years.
        - What actually happened in reported in annual progress runs. What happens and "what if" scenario of milestones are different things.
        - **Claggett:** Concurs.
        - **Antos:** To clarify, at the end of the milestone period, progress runs are compared to milestone commitments.
            - **Keeling:** But CBPO generates progress for the land use.
    - **Goulet:** How is a ten year average hydrology load compared to two-year milestone?
        - **Antos:** Both are run through WSM and this version of WSM uses the annual hydrology. CBPO evaluates what practices were committed to, what was the load that results, then, at the end of the progress run, what practices did you do to meet that load.
            - **Keeling:** Annual hydrology of that year not use in the current WSM, but from 1991-2000.
                - **Antos:** Correct. Annual average hydrology.
- **Hall:** What data would states/localities be expected to capture? Information of what is actually absorbed or planned?
    - **Claggett:** Theoretically for progress runs where actual BMP implementation is reported, this could be balanced with a reporting of actual land use category change over same time period. For milestones, could estimate anticipated land use change, given more specific local data in place of regional estimates.
- **Gattis:** Instead of role 5 on slide 4, replace with seeking opportunities for groundtruthing data.
    - LUWG could play significant role in helping to identify whether specific projects/areas are good candidates for groundtruthing and working with CBP on groundtruthing process.
    - **Claggett:** Clarify- for example, LUWG would come to collective agreement to estimate change over past two years and potential change over the next two years, then determine select areas of the watershed to groundtruth those estimates on a regular basis.
    - **Gattis:** Something regularly heard from locals is that they need to know if their actions are making a difference; also the need for local water quality monitoring.
        - Groundtruthing could be applied broadly to a number a different topics with respect to land use changes, not just redevelopment/infill estimates.
        - Milestone/progress runs are not best tools to aid local knowledge of water quality impacts of actions.
- **Goulet:** Per local government perspective, role 5 cannot be supported.
    - More important issues to address; why create something that cannot be discussed at this point.

        - Reality is that we cannot get actual disturbed acres into the model correctly as it stands now; breaking down disturbed acres into land use changes even more complicated undertaking.
    - **Gattis:** From PA's standpoint, many of PA milestones deal with institutional changes, not specific BMP implementation to be reflected in land use change.
        - **Tesler:** Concurs, more is done with programmatic BMPs in the PA milestones.
- **Baldwin:** MD would be in an excellent position to estimate land use change for the two-year milestone process.
    - Also, accounting for growth over this time, developed estimate based on ten-year cycle in 2000 and also evaluated 2006-2010 to put in place an adjustment to reflect economic environment over that period.
    - Could probably estimate actual changes over the past couple years fairly well and compare this to projections.
        - MD would be happy to share this with other jurisdictions. Realizes difficulty for other jurisdictions to have discussion of land use change at local level, but believes this is how we need to move forward for entire watershed.
        - **Quinlan:** Some VA jurisdictions could do this today, but vast majority could not.
        - **Hall:** DE can also do this, but questions uniformity of data and the ability to match this to the model. Also, how to ensure that information reported is valid in all jurisdictions?
- **Claggett:** Possibly reword role number 5. Rather than say it is our responsibility to monitor and report local land use data for two-year milestones, could change to responsibility to explore the use of local data in reporting of progress runs and two-year milestones.
    - Idea is that there is no other workgroup exploring this issue; therefore should be on the table for LUWG discussion. Or should this be pushed off?
    - **Goulet:** LUWG intended to be a short-term workgroup. Purpose of this workgroup is to develop a land use dataset for the 2017 midpoint assessment. Role 5 is well beyond the LUWG's charge.
    - **Keeling:** As WSM is regional scale, what difference would this make?
- **Berger:** Due to concern with role 5, discuss this proposed role as a groundtruthing effort or put this role into the secondary priority category?
    - **Gattis:** Supports relationship between land use and water quality, but not sure role 5 is the correct language to express this.
    - **Evans:** Suggests including "consider" at the beginning of role 5 language.
    - **Gattis:** Suggests deleting "2-year milestone" and replacing with "water quality improvement."

ACTION: Jenny Tribo and Karl Berger will work with Peter Claggett to revise LUWG primary role/responsibilities number 5 "Monitor and report local land use changes corresponding to 2-year milestone assessments." Revisions to this role/responsibility will be presented for LUWG review during next conference call.

- **Keeling:** Regarding slide 5 on secondary roles/responsibilities, change language to populations, households, and businesses.
    - **Evans:** Suggests changing to "Increase the accuracy of estimated populations on sewer and septic used to inform CBP models."

DECISION: Secondary LUWG role/responsibilities number one language will be changed to "Increase the accuracy of estimated populations on sewer and septic used to inform CBP models."

- **Baldwin:** In developing the Accounting for Growth strategy, MD wrestled with per capita loading rates within segmentsheds across the state.
    - Population amounts were coupled with employment center that has a point in database. Could assume a certain number of jobs associated with that point.

- Allowed for estimating of load/person/job.
- Suggests changing "populations" (language in role 1 on slide 5) to commercial centers.

Open Discussion – Berger and Tribo

- **Berger:** Propose 10/15 teleconference to further refine any midpoint assessment priorities proposed today.
- **Tribo:** Suggests looking at summary document to first identify large priorities.
- **Berger:** Regarding the delineation of federal land uses, this refers to the characterization of federal land use; therefore, a federal land user is in the same boat as local land user.
  - The recommendation to incorporate local land use in the next version of the model will also apply to federal land users. **Muhs:** Agrees, but emphasizes that federal agencies are looking for guidance.
  - **Goulet:** How to improve not just boundaries, bu**t inven**tories of federal land?
    - **Thompson:** Involves protected lands separating from federal footprint. Federal agencies have variable data available. Currently evaluating.
      - **Goulet:** Suggests a presentation on this after Thompson's work is completed. Large areas of federal land not in model.
      - **Claggett:** Federal lands are currently only in the model if mapped.
- **Berger:** Consider idea of developing or moving past tabular data to GIS dataset.
  - **Hall:** DE is moving towards this.
  - **Goulet:** All local/state governments moving in this direction. Suggests that probability layers should be focus.
    - Emphasizes that tabular information does not build credibility.
- **Quinlan:** What does DE mean by GIS of land use? CBP land use categories?
  - **Hall:** Can use CBP land use, but currently uses KISS model as core principal.
  - **Quinlan:** Therefore, all CBP land use categories can be evaluated? VA will never have that amount of local information.
  - **Keeling:** Does DE use remote sensing?
    - **Hall:** Extrapolation of three information sources: most current aerial photography, 911instruction, environmental or agriculture layer.
- **Lewis:** Change in crops changes water quality inputs dramatically
  - **Hall:** Yes, that's why understanding of local producer actions is so important.
- **Berger:** Does VA believe that GIS based land use dataset too difficult to develop for agricultural land, but could this be developed for just urban? Can this be split?
  - **Claggett:** If more practical to have spatially explicit urban layer, but not agriculture, this could be recommended as a high priority.
- **Keeling:** High loading degrading stream corridor- there is no GIS analysis or definition as to why loading rates 10x higher than regular pasture. Polygon could more clearly identify riparian area and degradation.
  - **Berger:** Key issue in agriculture is improved spatial accuracy of certain aspects (pasture, degraded pasture) - ?.
    - **Griffith:** Yes, especially as some BMPs are counted as percentage of total agriculture land.
      - WV shown as having negative conservation tillage, but WV NRCS is very sure that this is incorrect. Believes this is caused by inconsistent land use changes.
- **Claggett:** There is enormous opportunity to have more spatially explicit baseline, but not extrapolating backwards/forward (that will be tabular and lumped).

- **Berger:** Potential priority #1 for midpoint assessment- move towards more spatially explicit land use data where feasible, supported by local data, and important to more accurate loading estimates.
- **Evans:** Idea for LUWG meeting. PSU retiree, Wayne Meyers, is foremost researcher in exploration of probability datasets and ecological modeling. Could present as a future agenda topic to guide means to improve spatial accuracy of data.

ACTION: LUWG members to send Molly Harrington and Peter Claggett suggestions of future LUWG presentations and speakers.

- **Baldwin:** Suggests topic of different models or tools used by states to estimate land use change.
- **Berger:** Additional proposed midpoint assessment priority – currently, there are two urban land uses (pervious/impervious) for actual loading. Suggests increasing number of specific land use categories.
    - Will the model accommodate more urban land use categories? If not, would this effort still be worthwhile?
    - **Goulet:** From Urban Stormwater Workgroup standpoint, this will probably be priority number 1.
        - **Grose:** Would be high WV priority.
            - **Baldwin:** MD concurs.
    - **Claggett:** Priority of developing low-density residential or commercial categories?
        - **White:** MD just requests more specificity.
        - **Grose:** Agrees, many WV areas do not fit current land use categories.
    - **Evans:** PA has 6 urban categories (low/med/high residential and low/med/high industry/commercial).
- **Berger:** To some extent, model loading is not the point, but increasing credibility by matching categories to local data.
    - **Quinlan:** How much integrity of the data if different loading rates are not reflected?
- **Goulet:** Is a big shift necessary? Shift to land cover to land use?
    - Does the land use drive the model or model drive the land use?
    - **Claggett:** If management actions are different on different land uses, those land uses need to be represented separately. Model would care about if the land use loads differently and if it is managed differently; therefore, necessitating different representation, but representation that is easily understandable by local stakeholders.
    - **Evans:** Research shows that loading rates differ by density and type of urban land use. Therefore, loading rates should be more use oriented.
        - **Keeling:** Current model has high variability in loading rates even in same segmentshed.
- **Berger:** Sufficient interest in having increased land use classification categories. Will include as LUWG priority for midpoint assessment.
    - **Burdick:** Fairfax County agrees.
    - **Stewart:** Categories must be linked to different loading rates.
    - **Berger:** Finer classifications but also evaluation of loading implications.
- **Berger:** Suggestions for LUWG priorities related to agriculture?
    - **Johnston:** Ability to determine bufferable domain.
    - **Quinlan:** Concern about data sources for agricultural lands in general. Not sure how to improve.
        - **Claggett:** Still could be improved (e.g. federal subsidies matched with aerial photography).
            - **Quinlan:** Can this farm track and field information be used by CBP? 1619 concerns?
                - **Claggett:** This maybe where probabilistic land use comes in. Use this information to increase confidence of agricultural land,

then with added soil and crop type information from other data sources, overall confidence increased without violating 1691.

- **Stewart:** Stream corridor resolution very crude, many streams missed.
  - **Claggett:** High confidence is possible for forested streams, but decreases where streams are not forested.

- **Berger:** Regarding agriculture, more spatially explicit data would be great, but it is unclear how this would be accomplished. Less available data; therefore, more experimental methods.
  - **Keeling:** AgWG recommending moving away from 5 yr agriculture census data and use more annual data, so not linearly interpolating over 5 years. Encourages NASS to collect data annually, then using that data for tabular information.
    - **Berger:** LUWG recommended methodologies for agriculture vs. urban may be different. Possible midpoint assessment recommendation.
  - **Antos:** Possible recommendation of: For agricultural land uses, explore uses of annual NASS data, USDA data using probabilistic modeling methods as ways to improve accuracy of agricultural land uses.
- **Berger:** Other LUWG priority recommendations for midpoint assessment recorded by Antos?
  - **Antos:** Urban: improve land use categories and, to the extent possible, differentiating loading rates between categories.
  - **Berger:** Also, movement toward more spatially explicit where possible and supported by localized data, noting agricultural and urban methods to accomplish this will be different.
- **Berger:** Regarding future meetings, does it make sense to divide meeting topics between agricultural and urban issues?
  - **Goulet:** Most of the basic land use issues are cross-cutting between sectors.

ACTION: LUWG midpoint assessment priorities document will be sent to LUWG for review prior to submission to the WQGIT.

- **Claggett:** Another big potential issue involves resetting the TMDL allocation to 2025 land use. This could enable crediting land conservation, land use planning.
  - **Antos:** Currently set to 2010 land use because at that point of 5.3.0 development not enough time to develop reliable 2025 methods without cutting into jurisdictions' time to develop Phase I WIPs. However, if decision now is to use 2025, we would need to build in more time to evaluate methodologies and assess impacts through groundtruthing.
  - **Antos:** Projections are up to LUWG to potentially develop if LUWG decided that methods should change.
    - **Goulet:** This could go on the priorities list, but need a much longer discussion as would involve revising TMDL.
    - **Antos:** Based on the midpoint assessment process, this could be reopened.
      - **Goulet:** Recommends putting topic on midpoint assessment priorities list and LUWG future discussion list.

ACTION: Jurisdictions and localities with land use models, tools, and projections to provide information to Molly Harrington with contact information for future LUWG presentations.

- **Antos:** Does workgroup also want to list issues involving federal land uses and adding a wetland land use as midpoint assessment topics?
  - **Tribo:** Supports wetlands land use category.
  - **Goulet:** Wetlands land use category is probably a tier II priority.
  - **Berger:** Regarding federal land uses, not a specific new topic because issue is addressed through priority regarding a focus on local land use.
- **Antos:** Concept of incorporating local data. Is this a Tier I item relating to transitioning from tabular to GIS?
  - **Berger:** Yes, two topics can be combined.
- **Quinlan:** Also supports wetlands land use category.

- **Antos:** Will include wetlands as tier II priority and will incorporate federal land use issue into priority about local data.

ACTION: Any changes to LUWG membership list should be sent to Molly Harrington.

Participant	Affiliation
Jenny Tribo, Co-Chair	HRPDC
Karl Berger, Co-Chair	MWCOG
Peter Claggett, Coordinator	USGS/CBPO
George E. Onyullo	DDOE
Bryan Hall	DE Office of State Planning & Coordination
Bryan Bloch	DNREC
Jennifer Walls	DNREC
Jeff White	MDE
Michel Ney Sheffer	SHA
Dan Baldwin	MDP
Graham Petto	MDP
Margaret Kaii-Ziegler	Anne Arundel County Dept. of Planning & Zoning
Steve Stewart	Baltimore County, Dept. of Environ. Prot. & Sustainability
Jim Lewis	University of Maryland Extension / CED - Caroline County
Matt Johnston	UMD/CBPO
David Newburn	UMD
Rob Gunter	Queen Anne's County, Dept. of Planning & Zoning
Chris Yearick	USC
Dave Bubniak	Southern Tier Central Regional Planning and Development Board
Ted Tesler	DEP
Mary Gattis-Schell	Lancaster County Planning Commission
Beverly Quinlan	DCR
Bill Keeling	DCR
Norm Goulet	Northern Virginia Regional Commission
Justin Shafer	DPW, City of Norfolk
Darold Burdick	Fairfax County Office of Planning and Zoning
Douglas Griffith	WV Department of Agriculture
Megan Grose	WV DEP
Barry Evans	PSU
Laura Muhs	DoD/DoN
Katherine Antos	EPA/CBPO
Gary Shenk	EPA/CBPO
Jeff Sweeney	EPA/CBPO
Renee Thompson	USGS/CBPO
Christopher Rogers	URS Corporation