MINUTES
CHESAPEAKE BAY PROGRAM
Land Use Workgroup
February 25th, 2013
http://www.chesapeakebay.net/calendar/event/19206/

ACTIONS AND DECISIONS:

ACTION: STAC proposal document will be sent out early this week. Members should submit their comments and any objections before the deadline of March 1st.

DECISION: Face to face joint meeting with the Forestry Workgroup will be held on May 1, 2013.

MINUTES:

1. Co-Chairs Karl Berger (MWCOG) and Jenny Tribo (HRPDC) welcomed everyone and confirmed participants.

2. Peter Claggett (USGS) presented Comparing Local and Phase 5.3.2. Land Uses.
    - Berger: Note the significantly different loading rates based on state river basin
    - Sally Claggett (USFS): Why do land uses vary significantly by region?
        - Berger: Related to topography, and length of growing season.
        - Steve Stewart (Baltimore County): The bay model takes into account the complex variations in loading rates (due to rainfall, slope, infiltration of soils etc.).
        - Claggett: Every land use has a range in reported literature at which the loads can be adjusted. This explains some of the difference in land use loading rates between states. Atmospheric deposition for forest and for impervious is another reason for the differences.
    - Stewart: Suggest using a no BMP run rather than progress run, because that removes variability of differential implementation of BMPs.

3. Leslie Grunden (Caroline County) presented Local and Phase 5.3.2. Urban Land Uses in Caroline County.
    - Claggett: CBPO is under-estimating total impervious in Caroline County by 30%?
        - Grunden: The number includes parking lots, roads, driveways and structures. There are as many non-addressable buildings (outbuildings, chicken houses) as residential.
    - Berger: This illustrates the concept of disconnected impervious, if a chicken house rooftop runoff drains into a farm field, the loading rate should be much different than if the runoff were directly entering a storm drain.
        - Grunden: There does need to be a different loading rate for these disconnected units.
    - Berger: If county data can be incorporated into the model, what's the cutoff date for collected data?
        - Claggett: Most recent data possible. By 2015 most data should represent 2012-2013.
    - Berger: Can the analysis be parcel-driven?

    - Claggett: Land use data by parcel, and land cover data from planes, satellites. From a modeling perspective both land cover and land use are important.
    - Grunden: Parcel by parcel information from Caroline County.
    - Claggett: Ideally every jurisdiction would report the total acreage of each class in each modeling segment. Goal to define a classification system that will make the crosswalk between jurisdictions and CBP as transparent and clear as possible.
- Sally Claggett: Does Caroline County have tree canopy data without satellite info? (New land cover for Phase 6.0) Some jurisdictions could get it from averaging.
    - Grunden: County has Greenprint, DNR data. Latest satellite resolution is 2 meter.
- Jeff White (MDE): Many Eastern Shore counties have tree canopy layers already.
- Do jurisdictions have data for TMDL purposes?
    - White: MD presented this as an opportunity for jurisdictions to collect the data and to be prepared for future TMDL use.
- Grunden: A potential resource is a GIS library online through Chesapeake Commons, data throughout watershed on water quality and parcel layers.
- Claggett: University of Vermont will be mapping tree canopy throughout MD at one meter resolution. Recommend using this data for Caroline County, and to define the herbaceous layer as a next step.
    - Grunden: Does turf include a fertilizer assumption?
        - Berger: Yes, nutrient rate included.
        - Grunden: With few manicured lawns, probably not an accurate assumption for Caroline.
        - Claggett: Suggest focusing efforts in Caroline county to define and separate mixed open, scrub/shrub acres from fertilized turf grass and forested neighborhoods.
- Claudia Hamblin-Katnik (Alexandria): Clarify suburban?
    - Claggett: Anywhere landsat satellites captured large patches of impervious surfaces, was categorized as urban. Dense secondary road networks, verified by aerial photography, categorized as suburban. Everything else is rural. Having consistent zone distinctions in the local data helps with the comparison to CBPO data, and understanding the cause for any differences.
- Pat Buckley (PADEP): Concern about PA counties' ability to do the analysis on their own, rather than submitting numbers to CBPO.
    - Claggett: Counties are encouraged to participate in the crosswalk process to the extent that they are willing. Jurisdictions that are not in a position to do the analysis will still have their data used.
    - Suggestion for PA to hire a GIS intern to help with data collection.
    - Claggett: If jurisdictions feel accurately represented by the Bay Program, no need to do their own analysis. However, they are welcome to participate in the process if they do see inaccuracies.
    - Berger: CBP can put together resources to help jurisdictions
    - Sally Claggett: Recommend using the high resolution mapping that has been done for tree canopy across PA, to collect good impervious data at high resolution.
- Beverly Quinlan (VA DCR): With not every local government in the watershed represented on LUWG, how will these requests be communicated to all stakeholders?

- Claggett: The initial phase of the data request is to determine what data exists. The next phase will be to determine gaps and how to fill them in.
- Quinlan: Local governments would expect their data to be used
- Claggett clarified that all received data will be used.

4. Jenny Tribo(HRPDC) presented Local and Phase 5.3.2. Land Use Comparisons in Hampton Roads Planning District Commission
   - Berger: Why does local data contain more impervious acres than CBPO?
     - Tribo: The impervious difference is likely related to resolution of data
   - Berger noted that what the Bay Program categorized as pervious developed, local data categorized as forest or wooded acres in urban areas.
     - Claggett: CBPO coefficient was probably lower in low intensity developed.
     - Tribo: Local data found 6,000 acres under forest, CBPO less than 1,000.
   - Claggett: Workgroup suggestions welcomed to decide the appropriate form of CBPO data (tabular land use, raster land use/land cover, model data with loads etc.) for local jurisdictions to use for comparison purposes.

5. Guido Yactaco (CBPO) presented CBPO methods for estimating construction acres .
   - Berger: Did the change in impervious acres come from satellite data?
     - Yactayo: Landsat imagery
   - Stewart: Probably over estimating construction acres during recession.
     - Claggett: The extrapolation to 2010 and further is based on county population projections in 2010.
   - Berger: In Scenario Builder the new constructed land comes from forest, but it would actually come from both forest and Ag.
     - Claggett: In the model, forest refers to everything that is left over.
   - Yactayo: Reason for zero change in impervious 2006-2010?
     - Claggett: The ratios were derived from 2006-2009 jurisdiction data and linearly interpolated impervious change over that same time period. Ratios stayed constant, but the annual rate of impervious surface changed through time, resulting in different levels of construction.
     - Claggett: DC is growing, but it was not projected to grow, so no construction was projected.
     - Stewart: How much construction in DC is redevelopment?
     - Berger: Significant redevelopment, but is still a disturbance.
     - Stewart: Tying the increase of impervious cover to the acres of disturbance may not take into account the changing patterns of development.
     - Clagget: Correct. The construction land use represents a major sediment source to the Bay. How much of a sediment source is redevelopment? Should redevelopment be treated the same as new development?
     - Stewart: How close is the projected acreage of disturbance to the actual acreage? Accuracy will be important because it is large load.
     - Load may not be accurate because it is a different kind of disturbance.
     - Stewart: Acres of disturbance in the 2010 progress run were 3 times higher than the actual permits. (Not including state permitted projects but still high) Maybe tying it to the increase in impervious cover is a solution.
   - White: The state specific ratios are what is actually applied in the model?
     - Yactayo: yes
     - Claggett: Were county ratios used?

    - Yactayo: Yes. Unless there was a change in impervious with no permit acres, then used state median ratio.
- Claggett: Note that number of permits during recession.
    - Were these existing permits that were renewed?
    - Grose: Acres that are currently permitted and newly permitted are both reported.
    - Berger: What's the relationship between a permitted construction acre and actual disturbance?
    - Yactayo: target loads address this relationship.

6. Jeff White (MDE) presented Maryland construction acres.
    - Grunden: Is it possible to add one more layer to measure actual disturbed acres initiated?
        - Stewart: If it is a phased project, they will take out a permit for each stage
        - Grose: Permits vary widely by jurisdiction
    - Grunden: How do we determine the difference in sediment generation between redevelopment and new development?
        - Stewart: Expert panel working on erosion and sediment control, have they reviewed literature on this?
            - Grose: Limited literature until very recently.
        - Tribo: Even if there is a loading difference between development and redevelopment still may not be able to get these distinctions reported. In a developed area like Norfolk, easiest to assume all development is redevelopment.

7. Megan Grose (WV DEP) presented estimating construction acres in West Virginia.
    - Claggett: What are the peaks in the concurrently permitted acres of disturbance related to?
        - Grose: Many are highway or wind turbine projects
    - Berger: WV data will come from the state?
        - Grose: More data from state than from county level
    - Claggett: What about using tax assessment records?
        - Grose: Found through tax planning groups that most counties have at least basic GIS data, for 911 purposes.
        - Claggett: CBPO has not used the 911 databases in the past, but having a point for every mailbox would be useful
        - Grose: Maps with the subdivision names helps with name change confusion
        - Claudio: Emergency planning group in the counties should have that kind of information.

Break for lunch.

8. Karl Berger introduced the discussion of recommended Phase 6 Land Uses.
    - Claggett: Suggested changes from LUWG members have been incorporated in the draft land uses document from January. Defined land uses will help to develop crosswalk with local data, and pursue loading rate information from expert panels.
        - Buckley: In the developed category, at USWG workgroup meeting there was an objection to the separation of shale gas pads and associated infrastructure.

  - Claggett: Noted.
- Mark Dubin (UMD) provided an update on the AgWG's discussion of Ag land uses. At their February meeting, the group reviewed three options for adding additional layers, and chose a new CDSI USDA land use data management system as a starting point. Using similar categories as USDA will provide opportunity for better data sharing. The USDA template contains broad land use categories, which will branch into layers of further detail. AgWG will address any refinements needed for Bay Program model capabilities at their next meeting.
  - Buckley: Suggest labeling CAFOs as federally regulated and state regulated instead of regulated and unregulated. (Also applies to pervious developed under 1b 1)
    - Dubin: Some jurisdictions combined their state regulated with federal regulated, so it would be different based on jurisdiction. Can look at a way to word this more clearly.
  - Berger: For Phase 6.0, would the Ag land use be derived from CDSI and NASS data sets in addition to Ag census data?
    - Dubin: Yes, it would be a combination. New opportunity to capture the data and verification from farm assessments.
  - Berger: Will this affect backcasting?
    - Dubin: Former system still used for backcasting, this will affect things moving forward.
  - Quinlan: VA has a point GIS layer of animal feeding operation, hoping it would be used in Phase 6.0 model.
    - Dubin: Currently use VA CAFO data to identify gaps in information.
  - White: How do the acres compare to the Ag census?
    - Dubin: Ag Census collected every 5 years, projections are used for interim years and improving projection methodology is a current priority.
  - White: CDSI classifications same as Ag census?
    - Dubin: Similar but some translations will be needed.
  - White: Is the data presented on a county scale?
    - Dubin: Farm or operational scale
- Darold Burdick (Fairfax county): Fairfax County's GIS system has over 100 urban developed land use categories, since there's no crosswalk, would it help to document some assumptions about translating land use categories?
  - Claggett: Yes, that is helpful. Or, if impervious surface data exists for residential classes, class separation is meaningful for the model.
  - Burdick: Expecting various ranges because so finely categorized.
  - Claggett: Providing both the pervious surface and the parcel land data would be the most helpful for the data request. Reporting your analysis and the ranges would help with the crosswalk.
- Claggett clarified that the request is for just the data, although any analysis help is appreciated.
  - Berger: This is the initial call for data, opportunity to submit other data or make refinements as we work through these issues.
- Buckley: Shale gas pads are not regulated by NPDES permits, therefore not part of the regulated load. PA would prefer not to have it broken out at all, but definitely should not be under NPDES permit.
  - Claggett: Noted, thanks.

9. Berger introduced the STAC workshop proposal. Deadline is March 1st for proposals for workshops that would occur over the next year. USWG has a draft proposal that could be submitted jointly with LUWG if approved by workgroup.
    - Buckley: Would prefer to see the document before concurring
        - Berger: Once available the proposal documentation can be sent to LUWG members for quick review and approval.
    - Claggett summarized the two proposal ideas previously considered by LUWG; probabilistic land use and impervious surface conductivity. Given that the USWG proposal includes the issue of impervious surface conductivity, LUWG is invited to cosponsor the existing proposal.
    - Berger: Workshop would bring together experts to focus on the urban land uses, and specifically on loading characteristics. Possible discussions could include; loads from surfaces disconnected from storm drains, urban turf grass categorization, and stream corridors as land cover. If workshop occurs in 2013, it could potentially be a kickoff to a longer process, as many of these questions cannot be fully answered in a two day workshop.
        - Hamblin-Katnik: Possible addition: loading from urban, new development verses redevelopment
        - White: Possible addition: mapping connected vs. disconnected
            - That might come out of the workshop
            - Claggett: if discussed at the workshop, would need to be defined based on existing literature.
    - Berger: Document will be sent out as soon as possible, comments welcome, specifically interested if anyone objects.

ACTION: STAC proposal document will be sent out early this week. Members should submit their comments and any objections before the deadline of March 1st.

10. Peter Claggett discussed mapping the Federal Land and Land Uses assigned by the WQGIT. CBPO has collected some Federal parcel boundary information already, but it needs to be reviewed and corrected. Suggestion is to build a geodatabase template, which would be web accessible via password. Federal agency representatives could edit polygons, overlay county boundaries, and account for the acres that are pervious and impervious. Already have EPA agreement for a contractor to build the site, Federal agencies would have a 6 month window to access and improve Federal land and land use database.
    - DE noted that there would be little or no fed land to account for in DE.
    - Any issue with response from Federal Agencies?
        - Claggett: Planning to work through Federal Facilities team
        - Greg Allen (CBPO): Federal agencies improved their data 1.5 years ago, so this would not be the first they have heard of it, and they are interested in a strong data layer. It is in the agencies' interest (as it is used to track loads and reductions from BMPs) to have an accurate data set.
    - Berger: Any concern about reconciling between federal and county total?
        - Suggestion to make sure counties have input in designating the land allocation.
    - Comment that DoD may not be willing to provide specific polygons and layers.
        - Claggett: Could be handled with an internal database separate from the external.

  - Claggett clarified that the difference between a National Park and an Air Force Base in terms of loading would be in its pervious or impervious categorization.
- Allen: Currently have good data on Federal Facility polygons and spatial boundaries, this effort would be to collect the land use information.

11. Berger led a discussion of upcoming meeting topics including:
    a. Identifying need for BMP panels for new land uses
    b. Forest and wetland focus- joint meeting with Forestry Workgroup – May 1st
    c. Mapping Agricultural lands – joint meeting with the Agriculture Workgroup
    d. Mapping rural impervious surfaces and septic systems
    e. Backcasting & forecasting methodologies
    f. Impervious surface connectivity

- Sally Claggett: The Forestry Workgroup would like to have a combined meeting with the LUWG on May 1st to discuss some of the land use layers.
- Peter Claggett: Forestry meeting addresses the forest and wetland focus (b). AgWG is taking the lead on Ag land use classification(c). Mapping rural impervious and septics (d) can be the topic for next face to face meeting. Backcasting and forecasting methodologies (e) can be discussed later this summer. Impervious surface conductivity (f) addressed in the STAC proposal.
  - Dan Baldwin(MDP): MDP would be willing to present on rural impervious and septic systems
- Berger:
  - Conference calls March 18th and April 15th.
  - May 1st joint meeting with Forestry.
  - May 20th face to face meeting to discuss rural impervious/septic topic.
- Claggett: In the interest of keeping up with what's already been discussed and decided, will follow up with a summary of the construction presentations from today.
- VA and MD would like to be involved with AgWG's discussion of land use classifications
  - Berger: Can request an AgWG meeting to focus on land use issues, which interested LUWG members can attend. LUWG can also request a backcasting/forecasting methodologies presentation from Mark following the Ag modeling workshop.

DECISION: Face to face joint meeting with the Forestry Workgroup will be held on May 1, 2013.

Adjourned.

Next Meeting: Monday, March 18th conference call:
http://www.chesapeakebay.net/calendar/event/19282/

Meeting Participants

Name	Affiliation
Jenny Tribo, Co-Chair	HRPDC
Karl Berger, Co-Chair	MWCOG
Peter Claggett, Coordinator	USGS, CBPO
Jim Baird	American Farmland Trust
Dan Baldwin	MDP
Bryan Bloch	DNREC
Pat Buckley	PA DEP
Sally Claggett	USFS
Mark Dubin	UMD Extension, CBPO
Megan Grose	WV DEP
Leslie Grunden	Caroline County, MD
Claudia Hamblin-Katnik	City of Alexandria
Beverly Quinlan	VA DCR
Christopher Rogers	URS
Justin Shafer	DPW, City of Norfolk
Steve Stewart	Baltimore County, MD
Ted Tesler	PA DEP
Claudio Ternieden	CTC
Jeff White	MDE
Matt Kaczynski	Caroline County, MD
Guido Yactayo	CBPO
Emma Giese, Staff	CBPO