Forestry Workgroup Meeting Minutes
March 3, 2021
9:00am-11:00am

Meeting Attendees:

Rebecca Hanmer, *Chair*
Sally Claggett, USFS, *Coordinator*
Katie Brownson, USFS
Matt Poirot, VA DOF
Lara Johnson, VA DOF
Todd Carnell, WV DOF
Zach Norris, CI
John Young, USGS
Jim Woodworth, DC DOEE
Mike Alonzo, American University
Matt Baker, UMBC
Michel Roberts, MD WQ Financing Administration
Anne Hairston-Strang, MD DNR
Craig Highfield, ACB
Iris Allen, MD DNR
Dexter Locke, USFS
Paul Emmart, MDE
Rachel Felver, ACB
Jason Swartz, PA DCNR
Peter Hoagland, NRCS
Lydia Brinkley, USC
Cassie Davis, NY DEC
Kesha Braunskill, DE DNREC
Patti Webb, DE DNREC
Judy Okay, VA DOF
Julie Mawhorter, USFS
Julie Reichert-Nguyen, NOAA
Jennifer Jones, Cacapon Lost Rivers Land Trust

DC's tree canopy lowers urban air temperature but the cooling magnitude depends on spatial context and time of day, *Mike Alonzo, AU, Matt Baker, UMBC*

Mike has been looking at the impact of tree canopy on temperature in DC, how patches and distribution of canopy affect cooling, and shared his methods and early results. Used generalized additive models to incorporate other land variables and temperature data collected at different times across transects in the city. May revisit the DC data and models to relate urban heat to urban tree phenology. The next study will focus on Baltimore.

Questions and Comments:

- Anne- Interested in that 40-50% area. Lower income areas don't have anywhere near 40%- what are the marginal gains of getting people to plant in their backyards vs street trees and park plantings?
    - Pre-dawn showing more effects for the smaller patches (below 50%)
    - MWCG is working on setting a regional tree canopy goal.
- Cassie- Would it be beneficial to see a similar analysis with data in winter/spring where there is less canopy cover to see if some of these effects and interactions are still occurring?
    - Mostly to learn about what impervious surface does, to see if you could isolate impervious, that may form a better interpretation of the model

- Jim- could your work point to a threshold maximum of impervious surface, e.g. a limit to the amount of impervious surface?
    - Really the best way is not just backyard plantings, soft canopy and pervious surface- the best is to simultaneously remove impervious surface and do plantings.
- Anne- In Baltimore, with vacant lot and building issues, would a vacant lot or row home be a large enough patch to make a difference?
    - Matt- Would be closer to distributed canopy if it was a single home. Some blocks have multiple demolitions, with common area in center of the block, and if those were planted out, it would be possible to create canopy at this scale.
- Katie- Quick question for the last presenters- do you have any thoughts about how to capture the cooling benefits of canopy for indoor spaces? i.e. do the same factors mediate the cooling benefits of trees within homes or businesses?
    - I think our results generally apply to indoor as well but there are more targeted ways to optimally cool indoor spaces (at least for 2 story or less houses). I-Tree Design (I think?) has specific info on right-tree right-place for cooling in our climate zone. (optimally, a large, deciduous tree positioned in SE or SW of home that can shade in summer but not shade in winter)
    - Yeah, I was thinking that even that one, large, optimally positioned tree could have a pretty big impact for the people that live in its shade (even if it is planted over impervious cover), but those benefits are highly localized
    - Not sure our results support the interpretation that it doesn't matter whether the tree is over impervious cover or not. The evidence from our analyses seems to be suggesting that an important part of the cooling benefit comes from something other than just shading.
- Anne- Would rates of transpiration differ based on soil volume (more volume likely for soft canopy)
    - We don't have data to address that in this study, but the grant that is funding us seeks to address these questions in greater detail.

Heat Watch: State Program Adapting to New Data *Lara Johnson, VA DOF*

Lara presented on VA DOF's efforts to incorporate heat island data into existing operations and prioritize equity in funding projects. The successful pilot project focused on how to re-green communities with their involvement and alleviate resident concerns, including funds for maintenance, stewardship, and continued community engagement after installation. Will be expanding to other neighborhoods in Richmond and working on 9 heat island mapping studies in VA Tree City USA communities with the Science Museum of VA and VA Independent Colleges.

Questions and Comments

- Anne- Any suggestions for community engagement? Every project now has that requirement, all projects funded. Helps us rethink which projects are a priority, and encourage people funded through that program, thinking about all these issues from the beginning.
    - The pilot took a year, and it was crucial to have the right people at the table. There were fears of trees, had to educate the community about why trees are important. Took a lot of energy and time. Concerns over maintenance- the project would never have worked without the maintenance component, and now community engagement is a requirement for VA Trees for Clean Water.

- Julie- Trying to work more closely across the bay program, Diversity, climate, local leadership to pull together these tools and approaches and package them to be more accessible to communities. Will be talking about that that at next FWG meeting. **If anyone knows of tools or datasets in this region, email Julie.** Project in Richmond funded by NFWF building on this work, presenting on a tree panel part of the Chesapeake Stormwater conference this spring, CSN Virtual Runoff Rendezous info: https://chesapeakestormwater.net/bay-stormwater/stormwater-retreat/2021-runoff-rendezvous/
- Rebecca- Do you have a summary of some of your lessons learned?
    - Not as a summary but Carver was a great example, happy to write them down. Not a catch all, every community is different.
- Paul- Very compelling! Thank you. As an aside, FYI: See this story map product from TNC with a mapper where a city name can be entered: https://tnc.maps.arcgis.com/apps/Cascade/index.html?appid=7fb38bef713d4bca9a411b0fd1079dff

Credit Duration Recommendations for Verification *Sally Claggett, USFS*

Sally presented the proposed changes concerning backout and credit duration for discussion and consensus on recommendations to be made to the WTWG. See draft recommendations and more details here.

- Anne- Do we have data on urban trees for the urban tree inventory that can get at the lifespan question? 80 years seems long.
    - Sally- With forest planting being a bigger investment, more planning and buy-in, a forester is involved. That's why it's higher for forest plating. Interested to hear data on urban plantings.
    - Lara- Data is primarily coming from street trees where the survivability is much lower. Agree that 80 is a little high but the 40 yrs are appropriate. There is an urban FIA, but it's early on and don't have the data we need yet.
    - Anne- Could mine data for tree age, look at the distribution of age using the Baltimore pilot?
    - Sally- could look at FIA- but we're focusing on practice, not the canopy age. It's a social science issue, if there's any data on the practice of planting trees that would be ideal. **Proposing that urban forest planting practice life span move to 40 years**.
- Rebecca- Here in Fredericksburg, for urban forest buffers: we are seeing more flood damage of buffer trees.
- Judy- Why is the PL for narrow forest buffers with fencing less than w/o? W/O fence you have cattle opportunity to impact the buffer as well as wildlife and mowers. These two seem to be flipped.
    - Katie- It's based on relative costs, weighting both components of the practice. Just a decision that was made by the CAST team. We're proposing they stay the same.
- Paul Emmart- Apart from credit duration in the model, there are economic consequences. Water quality trading credits tend to be pegged to the model duration credit. So as a result, 10 vs 15 years, getting less credit in an economic sense.
    - Sally- In that case they would use the 15-year mark for the investment, if it's separate from the life of the practice investment.
- Rebecca- if the BMP is re-verified, then you continue to get BMP credit. Only if the practice is unverified that the total BMP credit drops out. Still concerned about confidentiality on buffer plantings, no lat/long data, discrepancy between model and what's seen on the ground.
- Anne- Was not overwhelmed at the ability to distinguish plantings at 10 years, at least hardwood seedlings, could be 15 years but before that was a lot of variability.
    - Katie- We know there will be variation but we're trying to get at an average value- can we, on average, detect a planting at 10 years?

- Jim- why wouldn't the back out be adjusted to be the same as the credit duration? how do you reconcile the 5-year difference if the credit is 15 years? is there double-counting or overlap? I guess I don't understand the interaction
    - WTWG is worried we are double counting because of the land use model. Whether it's 10 or 15, we just need a number. We need to know by April so that CBP can make decisions and be ready for reporting in September.
- Iris- VA analysis will be done this week, still looking for more planting shapefiles from PA.
- Julie- In the past, backout occurred behind the scenes when the land cover was updated. 10 years is a boost from what we've done in the past.
    - Cassie- As chair of WTWG, backout is at 2017 progress and changing it would be a significant increase from what we currently use. 10 years is from the last land use, opposed to ten years from planting. The buffer needs to be at least 10 years old at the time of the data imagery collection.
- Rebecca- Put an asterisk in the 10 years for buffers. Our urban forest buffer acreage is so low, what kind of overcounting is dangerous, maybe it's the integrity of the model? Agree with Jim and Anne that we should not agree to 10 years for ag forest buffers, before we absolutely have to. The UTC expert panel discussed the issue and reported out 10 years, not sure which different plantings it refers to. The important group is the WTWG- and FWG has reservations about the 10 yr ag forest buffers
    - Judy- I am with Rebecca on buffers because we are not even getting all buffers reported let alone double counting. Talking to NGOs working with buffers they are all afraid of double counting, so they end up not reporting at all.
- Anne- This is a model exercise, not a land use exercise. How much are we buying with the proposed 15-year credit duration? To reconcile the difference and get credit for the upland portion for an additional five years, without verification, the conversion is riding on the land use.
- Sally- **It's important for states to have the extra 5 years to do verification.** Modeling group said they could separate out the two types of credit for buffers, 15-year benefit and that would make a difference for people doing verification on the ground.
- Paul- Outside of the model, when the state programs offer WQ credits (marketable, traded) they try to use BMPs and life spans approved by CBP, and that uses credit duration. Side consequence of changing the length of time, there's more incentive for 15 years than 10.
    - Sally- the 15-year duration is really about the CAST model and water quality, so should we use practice life for calculations?
    - Paul- For ecoservices calculations a much longer span of time is used for tree buffers, but in terms of water quality credits, look to credit duration in the model for the life span. Not how long is it growing on the landscape, but how much time you get the credits.
- Sally- For Urban forest buffer, credit duration is between 10 or 15 years. It matters what the credit duration is for tree planting practices, buffers are in a separate category because of upslope efficiencies. Need to figure out backout for tree planting. Will tell WTWG that we're looking closely at this 10-year duration and whether or not that's the average time these practices are showing up.
- Anne- Iris is looking at files of seedling plantings, does not have shapefiles for urban tree plantings that have a larger planting stock, please send if you have a shapefile and planting date.
- Judy- For the program and decision making, it's easier to start with the higher number first and then back down if the group doesn't agree.

RFB Workplan items needing FWG focus *Katie Brownson, USFS, Sally Claggett, USFS*

Katie reviewed some of the near-term actions from the forest buffer workplan, to develop state action strategies and technical assistance plans, and asked for feedback on jurisdictional progress to enhance and renew leadership around buffers.

- Anne- Saw some changes around leadership while materials were reviewed. Seeing a lot more action around climate, particularly in the legislature and were pushing to make sure we're planting trees for both climate and water quality purposes.
    - Katie- great point to reiterate the relevance of what we're doing now, talked about doing that white paper, still on Sally's radar.
- Sally- The idea of the action strategy is to help you and is a means of communicating the importance of buffers to the MB. The strategies can be high level, just a few pages of things like priorities and partners. Could do a short round robin update at April meeting, so we can bring a draft to the MB at the biennial meeting in May.
    - Paul- There was a forestry strategy emphasis during the Executive Council meeting in the fall, what was the thinking behind that, how will it roll out?
    - Sally- That's in the background, an important document that the forestry agencies for behind as a watershed but this is specific to riparian buffers on ag lands, water quality goals in the WIP.
- Anne- So this is above and beyond what the 2-year workplans are doing?
    - Yes, this is state only, still in touch with the MB and there's a small group within the MB that's looking into why we aren't reaching our goals. Plan to check-in at the April FWG so we can prepare to discuss our progress in May.
    - Anne- We can do follow-up on the new Forest Action plan, bring attention to the goal and how people can contribute to it.
    - Katie- Forest action plans are a great starting point.
- Lydia- In NY, meetings around climate goals are being held by upper-level people, great opportunity to talk about buffers.
    - Anne- Is there a product of those meetings?
    - There will be action strategies.
- Katie- Second workplan item focuses on developing state technical assistance plans. Could be a role for incorporating a technical assistance piece into these initial state action strategies, tackle both at the same time.
- Anne- The FSA USFS support for the CRP foresters has been really helpful.
- Sally- NRCS has authority for direct hire for 1500 new technical assistance positions. The Chesapeake Bay Commission sent a letter to all the states asking them to focus on the watershed. Need to target soil and water conservation districts, make sure they are at the table while you develop the strategies.
- Anne- Multi-state effort developing the Potomac Basin forest buffer strategy. Sally, Katie, Craig, Frank, Michael, Matt, and Jennifer interested in being involved
- Judy- it would be good to include plans on recording and reporting in the strategies.

Adjourn