Chesapeake Bay Program

Science. Restoration. Partnership.

Forestry Workgroup Meeting Minutes

July 2nd, 2025 | 9:00 am - 11:00 am

Meeting Materials

Attendees

Alanna Crowley, MDNR
Anne Hairston-Strang, MD DNR
Beth Johnson, Sussex Conservation District
Cassie Davis, NYS DEC
Catie Soriano, DE DNREC
Chris Miller, DE FS
Chris Peters, PA NRCS
Craig Highfield, ACB
Daniel Pratson, UMD
Emily Heller, CBPO EPA
Emily Shosh, PA DCNR
Erica Carlsson, DC DOEE
Everald A. McDonald, PA DCNR
Frank Rodgers, Cacapon Inst.
Heidi Bonnaffon, MWCOG
Helen Golimowski, Devereux Consulting
Jenna Talbot, DE DNREC
Joel Cockerham, Cacapon Institute
Joseph Delesantro, CBPO EPA
Katie Brownson, USFS
Kristen Heberlig, CBF
Lara Johnson, VA DOF
Lydia Brinkley, USC
Matt Keefer, PA DCNR
Marilyn Yang, CRC
Meghan Noe Fellows, DE Center for Inland Bays
Michael B. Coverdale, DNREC
Nancy Sonti, USFS
Ned Brockmeyer, PA DCNR
Orsolya Lazar, PA DCNR
Patti Nylander, VA DOF
Rick Turcotte, USFS
Rob Schnabel, CBF
Robbie Coville, PA DCNR
Ruth Cassilly, UMD CBPO
Sara Weglein, MD DNR
Susan Minnemeyer, Nature Plus
Teddi Stark, PA DC

9:00 (5 min)	**Welcome and Introductions** – *Anne Hairston Strang (MD FS, FWG Co-Chair)* For roll call purposes, please enter your name & affiliation in the chat box. Call-in participants are requested to identify themselves verbally.
9:05 (10 min)	**Announcements** – *Katie Brownson (USFS, FWG Coordinator)* ● FWG Community Tree Canopy Co-Chair nominee announcement ● The new 2024 ed. Land Use Land Cover and hydrography data has been released! ○ LULC and hydrography data viewer ○ Full LULC dataset ○ The updated tree canopy factsheets and story map are expected to be released in August! ● A new literature review on urban trees and cooling (2018-2024) is available here! ● The Bay Program is hosting a webinar series to provide an overview of the proposed changes in the draft revised Watershed Agreement:

	○ July 2 (12 -1 pm): Webinar Series Kickoff Registration Link ○ July 8 (11:30 am – 1 pm): Thriving Habitats and Wildlife Registration Link ○ July 15 (12 – 1pm): Clean Water for a Healthy Bay Registration Link ○ July 24 (12 – 1pm): Understanding another revised Watershed Agreement Goal Registration Link ○ July 30 (12- 1pm): Engaged Communities: A Closer Look at the Final Proposed Goal of the *Watershed Agreement* Registration Link ● The **public comment period** for the draft revised Watershed Agreement has opened and will run from **July 1st - September 1st**! Everyone is welcome to submit comments via email to comments@chesapeakebay.net. For more details please visit the page here.
9:15 (15 min)	**Update on Agroforestry Expert Panel Evaluation Group (EPEG)** – *Katie Brownson (USFS, FWG Coordinator)* Katie provided an update on the draft EPEG recommendations to credit silvopasture and alley cropping for their water quality benefits in Phase 7 of the watershed model. The final recommendations will be brought back to the Forestry Workgroup for approval, likely in August. **Major findings and recommendations**: ● Comparable to Tree Planting BMP crediting (and uses partnership-approved loading rates for forest) ● Recommend a 10 year credit duration with directive to revisit crediting methods for these practices at the end of this period or earlier ● Decision: 25% mature canopy minimum requirement for both practices ○ Silvopasture efficiency rates (eligible on the pasture land uses; assume 25% of land receives the forested loading rate, but land use stays in pasture for the full area) ■ N = 21.75% ■ P = 23.36% ■ S = 3.29% ○ Alley Cropping efficiency rates (eligible on the crop and hay land uses; assume 25% of land receives the forested loading rate, but land use stays in crop/hay for the full area) ■ N = 23.73% ■ P = 23.16% ■ S = 24.26% **Discussion**: Ruth Cassilly (in chat): Thank you Katie- I have LOVED working with you!!! Rob Schnabel (in chat): Maryland added silvopasture as a cost share practice in 2022, as well as hedgerows and windbreaks. Regenerative agriculture practices Ruth Cassilly (in chat): Yes- MD pays 100% cost share as well as a small cash incentive for each tree planted, MD Healthy Soils grant also funds these practices, including alleycropping. Anne Hairston-Strang: Thank you, Ruth, for all the work on this effort!

	Ruth Cassilly (in chat): Thank you Anne- Katie is humble but she has also had a major role in this- definitely wouldn't have happened without her and Eric Hughes Rob Schnabel: To clarify, do you count X number of silvopasture acres or is it only where the trees are planted? Katie Brownson: You would report that entire area, because we're going to be requiring that the pasture part of that area be under intensive grazing as well. At the Agroforestry Network meeting, we were asked what if you're not planting at a density that's going to get a 25% minimum, and there would have to be some calculation of what area of pasture would give you 35% and we will provide guidance on trees per acre. We also had questions about adding canopy later, but we will have to be creative in capturing that to make sure what is being reported has that 25% reporting minimum at the end. Rob Schnabel: Also, looking at the science and looking mostly on the canopy cover rather than the soils especially with the pasture component helping with sheet flow and tree root depth helping with infiltration, I feel like we're missing something there by looking at canopy rather than the soils. Robbie Coville (in chat): I think the meta studies we assessed used canopy as a proxy or easier to measure indicator of overall changes from the practice. Assuming canopy in this practice comes with the full suite of well implemented silvopasture Ruth Cassilly: That's an excellent point that was well considered, there's such huge variability in how silvopasture and alley cropping can be done and we had to find something in common and the canopy cover is what we choose. We also have criteria in place such as the rotational grazing requirement that will be guidance for these practices and are considering the soil health component of this. Rob Schnabel: Well, thank you for all your hard work on this and this is a huge opportunity to get funding for these practices once they can be credited. Ruth Cassilly: We did should out MD, but I also wanted to shout out southeastern PA through Trees for Graziers, VA Tech, NY with Cornell Extension, so there's a lot happening around the watershed that isn't being formally recognized and we're hoping this pushes things forward. Anne Harston-Strang: Yeah, if we could measure soil organic carbon easily people would be glad to use it, but it's not easy to measure. Katie Brownson: Yeah and Ruth was pushing for a soil health outcome, but the partnership wasn't ready for that and to Rob's point yes, 25% canopy is an oversimplification, but for the watershed model, it's a good enough proxy, but not perfect. And maybe as the technology changes in 10 years we could bring a lengthier expert panel. Rob Schnabel: And it will be helpful once we have the trees per acre, so I'm curious what that rate will be and some are planting different trees with varying canopies. Katie Brownson: Yeah Robbie did some rough calculations and I think we were looking at 40 trees per acre as the minimum.

	Robbie Coville: We ran a bunch of scenarios, and with 20 foot diameter canopies on average, 40 trees per acre would do the trick. Robbie Coville (in chat): Some notes from this % cover and TPA discussion. I can't attach the doc showing a bunch of scenarios but here is the bottom line I came up with: **If we accept the equivalent of 25% canopy cover or greater, we could also say we expect an *average* of at least 20ft diameter canopies on 20x60' spacing or greater density. Framing it that way, the canopy cover goal could be changed to something like:** **At least 40 trees per acre of species with mature canopy of 20ft diameter or greater, or equivalent mature canopy coverage, distributed regularly throughout the practice area.** Anne Hairston-Strang: I'm wondering about the timing of crediting, do they have to show 25% canopy or can they show tree planting as the result. Katie Browson: It would be the same as buffers where you put them in the ground and assume right away that you're generating all the water quality benefits. Rob Schnabel (in chat): Thank you for moving this forward! The Mountains to Bay Grazers Alliance, Bay-wide grazing group promotes this and would be great to include a story in our next quarterly newsletter m2balliance.org Katie Browson: Please feel free to reach out to me with any questions or concerns. The goal is to have the final report out a week in advance of the August FWG meeting, and then we will request formal approval during that meeting.
9:30 (15 min)	**Update on the draft revised Chesapeake Watershed Agreement** – *Katie Brownson (USFS, FWG Coordinator)* Katie reviewed the draft revisions to the Chesapeake Watershed Agreement in the version that was released for public feedback on July 1st and shared opportunities to learn more and provide feedback. **Summary of draft revisions:** ● Revised to 4 goals and 21 outcomes (originally 10 goals and 31 outcomes) ● Currently the FWG falls under the Water quality GIT (and the Habitat Goal in the Watershed Agreement), but our new outcome Healthy Forests and Trees is proposed to be moved underneath the revised Healthy Landscapes goal with the following other outcomes: ○ Protected Lands, Land Use Decision Support, Adapting to Changing Environmental Conditions ● The Healthy Forests and Trees outcome language and position within the agreement structure are all still under review, and open for public comment period from July 1st - September 1st **Discussion**:

	Katie Browson: We may consider sending in another comment letter from the Forestry Workgroup like we did during Phase 1 of the process. We can further discuss during the August meeting. Rob Schnabel (in chat): Good to see that Brook Trout stayed an indicator species. Gets at headwater protection. My understanding was that there was some talk of removing this. Robbie Coville (in chat): I guess this broadness captures the idea that trees have a role in most land uses, not just in forests. So, that could be a plus!
9:45 (40 min)	**Healthy Forests and Trees: Establishing the New Numeric Forest Conservation Target** – *Katie Brownson (USFS, FWG Coordinator)* Katie reviewed the draft language for the new Forest Conservation target that will sit under the Healthy Forests and Trees outcome. This newer target will require further review from the FWG to establish a target acreage number. **Current Healthy Trees and Forests outcome language out for public feedback**: ● Outcome Language: Conserve and restore forests and tree cover to maximize benefits for water quality, habitat and people throughout the watershed, with a particular focus on riparian areas and communities. ○ Revised Targets: ■ Tree Canopy: Reduce the loss of existing canopy and plant and maintain 35,000 acres of community trees by 2035 to achieve a net gain in canopy over the long term. ■ Forest Buffers: Reduce the loss of existing buffers and plant and maintain 7,500 acres of forest buffers annually to achieve no less than 71% riparian forest cover by 2035 and 75% riparian forest cover over the long term. ■ **Forest Conservation**: Reduce the loss of forests to development through planning and conservation and plant and maintain ## acres of new forests by 2035 to achieve a net gain in forests over the long term ● Proposed questions: ○ How much planting is realistic? Should we use a 2014 Baseline to align with the other targets? Interest in meeting as a small group to develop a proposed numeric target? **Discussion:** Cassie Davis: Is the forest loss to development on the "Recent progress" slide from urban development or does it also include development from solar development and agriculture too? Katie Brownson: It does not include agriculture and I don't think it includes solar either, but I can check. I think it includes the impervious classes, extractive, and impervious developed. Solar may roll up into impervious, but I'm not 100%. Anne Hairston-Strang: Word on the street is there is more agricultural clearing and solar is certainly also a concern.

	Katie Brownson: That is a good question from the group if we want to include loss from agriculture in the outcome language. Anne Hairston-Strang: I would agree that development is the biggest concern, and that agriculture and solar will cause questions. Katie Brownson: In my mind solar is development, but we'll have to see how we're counting that from the Bay Program. Anne Hairston-Strang: It's development that's got a whole different set of issues in how you deal and mitigate it. Rob Schabel (in chat): Especially need forest conversion to row crops. Maryland Soil Conservation Districts and NRCS has this concern as these cleared lands are "marginal" lands, steeper slopes, etc Robbie Coville (in chat): I think development and infrastructure (to capture solar) are the biggest concerns. Data centers, warehouses, urban sprawl mainly, utility-scale solar Robbie Coville (in chat): In response to Rob's comment: Not all acres being equal is important, just considering slope alone, but as I understand it, not captured in CAST? Anne Hairston-Strang: That's not something captured in CAST. Susan Minnemeyer (in chat): Note on solar - the panels themselves are classified as impervious and the spaces between the panels are low vegetation. But my understanding is panels have some unique behavior because they aren't attached to the ground, so that is one reason solar panels are also a unique class in case it is determined they need to be treated differently from other impervious....this is an area of research. Anne Hairston-Strang: When do you think you could reconcile the 2022 data, Katie? (referring to the "Recent progress" slide that indicates the 2022 data is currently unavailable) Katie Brownson: With Lorenzo's position terminated, his computer with the data was taken in a matter of hours. I have all the data except for the agricultural tree planting data, so we may have to re-run it, but with changes in CAST, it may not be as accurate. However, we'll work on getting something. Anne Hairston-Strang: When do we need these targets finalized? Katie Brownson: By the end of the public comment period (at the end of August) Matt Keefer (in chat): Does the Forest Planting target include all sources of planting (TC, upland ag, buffers, urban forest planting, etc.)? Katie Brownson: It would include urban forest plantings and urban forest buffers, but not urban tree canopy BMPs because some of those are over impervious. We're doing the ones in the model where it would convert to forest for water quality purposes (practices where trees are assumed to have an unmanaged understory). The five BMPs are the two agricultural forest buffer BMPS, but then without exclusion fencing, agricultural tree planting, urban first planting, and urban forest buffers.

	Patricia Nylander (in chat): Would it also include nutrient bank planting projects? Katie Brownson: Do you all report those to the Bay Program? Patricia Nylander (in chat): I think DEQ might Katie Brownson: If you report them to the Bay Program, then they would count. Anne Hairston-Strang: It would be nice to have a target that is doable, but we've also heard concern about whether we are moving at a rate that is needed for Bay restoration. Katie Brownson: That's the sweet spot we tried to get at with our other outcome targets, and once we get the 2022 numbers we can revisit our average and see whether this is ambitious or not or if we can go higher. Lydia Brinkley: I struggle with these targets when we have been impacted by funding changes, can we put language in the outcome with a caveat that this is available pending funding? Katie Brownson: I think all of the outcomes are impacted by this, the hard part is what we're being tasked with setting long term goals in a period of uncertain funding. Lydia Brinkley: Putting a range might be nice then. Anne Hairston-Strang: Katie, have you heard how ranges are being received? Katie Brownson: I haven't heard any other groups doing that, if we gave a range they might just pick the smaller one, my inkling is to pick a higher one and if we do have more funding than we have something to work towards and if we don't, then it's a reality of our current situation. So bringing the goal to something that is achievable, but on the high end of what we are doing, is the sweet spot we're looking for. Erica Carlsson (in chat): Are we specifying caliper? Erica Carlsson: In regards to funding, the IRA funding was an inflated sense in what we could do and unprecedented amount, I would look at what we've done before that funding and that would be a good predictor. Anne Hairston-Strang: You also mentioned calipers, a lot of these are going into seedlings, so we usually don't have a caliper spec. Julie Mawhorter: We're using a 10 year average here, so it's really reflecting a much longer implementation period than the IRA funding. I would hate to see us change the targets for the current stretch we are in. On the urban forestry side, the IRA funding that is in place now is over 5 years and will have impacts in the years ahead that aren't yet captured in our historic data. We have the opportunity to shape our messaging each year, so if we see decreases that are happening it would be great to capture from you all, who are impending this work, about what's causing that and then to raise awareness about it. We haven't had that much in the partnership as before, but if we keep more tabs and raise awareness of the realities that would help to better convey to the public what's impacting our ability to meet these goals.

	Matt Keefer: When we look at the buffer accomplishment data, you're looking at some of the variations related to our state funding, so telling that story is important but also hard with the lag time to recall what the impacts are, etc. A question about the WIP targets, is this going to be independent from those? Anne Hairston-Strang: These are independent, they don't have to be independent, but they are not required to be aligned. Doesn't make much sense, but that's how it's done. Matt Keefer: Yeah, well if you add up all of PA WIPs commitments, it would reach 100,000 acres. When you look at the two components on the screen (referring to the "Recent progress" slide), I think part of this purpose is to see we are making good progress, but comparing it the loss it shows the value of conserving existing forests and challenging these losses, it's a communication value for those in leadership and our partners to demonstrate maintaining forests. Anne Hairston-Strang: Katie, is there a forested land conservation goal still? Katie Brownson: No, there's just a healthy landscape goal that includes language about forest conservation, but it's a little buried in there. Joel Cockerham (in chat): Have we investigated where we think bottle necks are to see if our targets are possible and where we can widen the bottle necks? Anne Hairston-Strang: Is there other analysis we can do to look at this? Katie Brownson: Yes, but not in the timeline we've been given, but I like how we are thinking and when we get to the point of writing our management strategies we should definitely be looking at this. Going back to Matt's point, you're exactly right and the benefit of having this forest conservation target is really to focus on that side of the equation. The planting number is good for us to rally around on the gain side, but I hope that the messaging around this new target is really focused on conservation, because that is the gap this is supposed to be filling.
10:25 (5 min)	**FWG Community Tree Canopy Co-Chair Nominee Introduction** – *Katie Brownson (USFS, FWG Coordinator) and Nancy Sonti (USFS)* Nancy Sonti, a nominee for the FWG Community Tree Canopy Co-Chair position, briefly introduced herself to the group and described her qualifications for the co-chair position. To review Nancy's CV, please visit the page here: **Nancy's introduction**: ● Nancy is a research ecologist with the U.S. Forest Service, working in the Northern Research Station under the Research and Development branch at the Baltimore Field Station. Her background is in urban forestry across a wide range of site types, from street trees to residential areas. Currently, her work focuses on forest patches in cities, along with social science research and environmental stewardship, particularly people's perceptions of urban nature, in addition to in-depth studies on tree growth and physiology. ● She has greatly enjoyed engaging with this group in the past and considers it one of the best examples of science and practice coming together to inform

	decision-making. She expressed gratitude for being considered for this role and is ready to support the group in meeting our collective goals. Anne Hairston-Strang: I formally move that Nancy Sonti be accepted as co-chair. *Voting members on the call expressed support and approved. No nays were recorded.* Robbie Coville: Welcome and thanks! Julie Mawhorter (in chat): So excited to have you stepping into the co-chair role for the urban side, Nancy - thank you!!! Matt Keefer (in chat): Welcome Nancy! Erica Carlsson (in chat): Robert isn't here but DC approves! Rob Schnabel (in chat): Welcome aboard!!
10:30 (15 min)	**Forest Sensitivity to Atmospheric N Deposition in Phase 7 of the Chesapeake Watershed Model** – *Joseph Delasantro (CBPO EPA, ORISE fellow)* Loading sensitivity to atmospheric deposition from forested load sources is being evaluated for Phase 7. Literature review suggests a significantly higher sensitivity than in Phase 6, but questions remain regarding the relative sensitivity between different forested load sources, as well as the relationship between sensitivity and loading rates. **Summary of presentation**: ● Sensitivity values are set relative to their loading ratios in the absence of additional information ● The sensitivity for true forests in Phase 6 is 0.023 ○ Comparison: Harvested Forest: 0.161; Construction: 0.2; Ag. Open: 0.22; Road: 0.6247 ● Looking at these results, we've had people say this sensitivity value looks too low, so this was put on a list for review ● UMCES literature review found: ○ CI: 0.05-0.16 ○ Average: 0.12 ○ Mean loading rate: 3.32lbs/ac/yr (higher than the Phase 6 model; for reference only, not proposing to use this to adjust loading rate) ● Reconciling the literature with CAST, they propose to set the sensitivity relative to the loading rate in CAST vs. literature ○ Given the range in potential loading rates for Phase 7: 0.04-0.14 ● Proposed questions: ○ Is this method reasonable? Should the sensitivity value of harvested forest (and/or true forest) be modified to maintain the 7x difference set in Phase 6? ○ Reach out to Joseph via email with any questions or concerns: jdelesantro@chesapeakebay.net

	Discussion: Rob Schnabel (in chat): As we improve / update modeling; we need to go beyond nutrient and sediment credits and quantify hydrology benefits, water infiltration and retention. Hydrology the Primary source, sediment and nutrients are secondary. Forests are clearly a "filter" but more importantly they regulate hydrology. Anne Hairston-Strang: In regards to whether it's reasonable, I think it's reasonable, but it's tough because there is a lot of variability in forest functions and there are not many studies available that go into the level of detail to inform this work. Overall it seems reasonable in terms of what I've looked at of harvested forest relative to unharvested forest. For a lot of these water quality functions, the real engine is the forest soil. I expect some difference. Katie Brownson: Like what? Do you expect for us to be 7x more sensitive to atmospheric nitrogen deposition than unharvested forest? Anne Hairston-Strang: I would expect a 7x difference for the few years where we're looking at, we do see a pulse. Katie Brownson: A 7x difference in loads yes, but would that translate into a 7x difference in sensitivity to atmospheric deposition is the hard thing. I'm having a hard time wrapping my head around this. Anne Hairston-Strang: Yeah, typically a lot of the time you see that increase you think that;s gonna be assimilated. Joseph Delesantro: To summarize this and maybe add another factor, we have the 7x difference in the loading rate. And the part of that that is due to the lack of uptake that I think we would see translated to the sensitivity value because that's nitrogen's falling in and we don't have that uptake, then it's going to come right now. But there's also the process of the increase in that loading rate that might be the result of the loss of nitrogen that's already in the system. So nitrogen that's retained in the forested landscape that is now lost due to the harvesting process. Anne Hairston-Strang: By root decay. Joseph Delesantro: Yes, so if that's a significant part of that pulse, then we would expect that the difference in sensitivity from true forest and harvested forest would be, just atmospheric deposition, would be less than the 7 because there's some part of that change also due to fine root decay and other processes in the soil or erosion. Anne Hairston-Strang: Going back to Rob's point on infiltration, the soil typically doesn't change a lot right away, so the infiltration rate can maintain, but the transpiration rate goes down with the harvested forest for the first few years. So you're going to have more water moving, and that's the other ingredient to a nutrient pulse. But so much of what's happening in the soil is also microbially mediated, it's not just the tree roots, so you would expect to see a lot of things taken up and most of our system's nitrogen would be considered limiting.

	Katie Brownson: Joseph, if I could just clarify that 7x difference. If the true forest sensitivity gets set closer to that 0.15 rate, would you still maintain the original forest harvest sensitivity rate or would you adjust that to the 7x what your forest was? Joseph Delesantro: The way we've been handling this is by doing the literature review for a single load source and input. In this case, true forest and atmospheric nitrogen deposition. We're comfortable adjusting that sensitivity value on its own, largely due to our limited understanding, which is why I'm here, and part of the question for you all. By default, we'd likely just increase the true forest sensitivity for Phase 7 and leave the harvested forest sensitivity at 0.16. But the main question today is: if we do bump up the true forest sensitivity, do we also need to adjust the harvested forest value to maintain a reasonable difference? A 7x difference may no longer make sense, but if we end up at the higher end of the range, a 0.01 difference might be too small. Rob Schnabel (in chat): Is hydrology, runoff curve numbers, a variable used to determine loadings? Lee Silvey & Luna Leopold's research Anne Hairston-Strang: We're running short on time, should we have a sub group convene on this. Joseph Delesantro: Yes, we can follow-up via email to set that up. **Post meeting update:** Please fill out this **WhentoMeet** if you are interested in joining a follow-up discussion on this topic.
10:45 (15 min)	**Round Robin/State Updates** *Ran out of time.* Lara Johnson: Patty Nylander is our new watershed coordinator replacing Caitlin Verdu. She's been with the agency forever and I would like you all to welcome her. *Participants on the call congratulated and welcomed Patty.*
11:00	**Adjourn**