

***Compilation of comments received from CBP partnership on the proposed
Urban Tree Canopy Expert Panel Statement of Work and Membership***

Updated 2/3/15 for distribution to Forestry Workgroup

Comments provided verbatim, without signatures or extraneous information.

Responses that were sent by Jeremy Hanson (Project Coordinator, Virginia Tech) on the given date are provided in blue

John Schneider, DE DNREC (WQGIT member), 1/26/15

Jeremy & David—The Panel membership list includes a “Regulatory Support” staff member. The SOW does not describe the role of that representative. EPA participation is certainly important, but is the role really “regulatory” in this case? Also, the SOW mentions Ari Daniels as providing key support; shouldn’t he be listed? John

Response sent 1/30/15:

Great comment, John. We (Virginia Tech) did not ask CWP to include this individual in their SOW as Ken is not a "panel member" and will be engaged strictly in a supporting role, as a resource to answer questions regarding regulatory issues as they arise. Having a Region 3 "regulatory support" person is a practice we are doing for new expert panels, to improve upon experiences with previous panel reports that were delayed due to regulatory concerns that can be resolved more efficiently by engaging Region 3 staff during the Panel's work. I expect that the forthcoming revisions to the BMP Protocol will further clarify the role of these Region 3 contacts for expert panels. We also have support from representatives of the CBP Modeling Team and the Watershed Technical Workgroup, which are called for in the current BMP Protocol so we did not ask CWP to explicitly describe their roles in the SOW. There are CWP staff members that will have assigned workloads to assist the Panel’s work, including Ari Daniels who will compile and summarize data from the UFORE model and other similar models and assist with the final report. The CVs of Virginia Tech, CWP or other support persons are not included for review/comment since they are not being proposed as experts for panel membership.

Bill Keeling, VA DEQ, 1/28/15

Jeremy,

Based on the timeline in the document for the scope of work for the Urban Tree Canopy panel I do not see how they can provide useful information for a land use in time for inclusion in p6 WSM. It looks to me that p6 WSM land uses will already be determined and the initial model if not subsequent version will be calibrated before the panel will get anything approved through the process. I really think we are looking at them defining a BMP instead of a land use and think the SOW should be modified to request the panel produce if possible the nutrient and sediment benefits as a BMP. It would seem it needs to be one or the other and not both and think the panels time would be better spent if focused on a single effort of complying with the BMP protocol and providing the partnership with what is needed for this to be considered and credited as a BMP. Wearing my Modeling Workgroup and Land Use Workgroup caps I have not seen sufficient justification to date to support a land use of urban tree canopy. If the panel can focus on this as a BMP exclusively and depending upon what science is available I could see a justification for it to be included as a BMP. Unless EPA is willing to push back the schedule for

model launch (extremely unlikely) I just don't see the panels effort producing what is needed for a land use in time since all land uses will be finalized according to my understanding by the end of April or roughly 3 months from now.

Regards,
Bill

Response sent 1/29/15:

Thanks Bill. I believe you and I are in agreement about focusing on UTC as a BMP, but were there specific statements in the panel's SOW that implied they'll be evaluating it as a land use? If the bulleted list under Task 4 gave that impression then we can remove "land use" from the 2nd and 3rd bullets, so they read "Practice name/title" and "Detailed definition of the practice," respectively. The list was boilerplate from the BMP Protocol so that's an easy fix to a small oversight.

As I understand it the Modeling Workgroup and the various WQGIT workgroups will be narrowing down and choosing the Phase 6 land uses and then setting the loading rates on the schedule you mentioned. They'll use a number of sources to help calibrate the loading targets such as Tetra Tech's lit review, which looked for loading rate literature for all the sectors. The panel will be focusing on evaluating Urban Tree Canopy as a BMP under their Statement of Work, so let me know if there are specific statements in the document that cause confusion about that point.

Kevin Sellner, CRC, on behalf of anonymous respected member of the research community, 1/29/15

Rich & Lucinda, a tree canopy researcher has called me and relayed concerns for the composition of the Urban Tree Canopy (UTC) Panel; the researcher wishes to remain anonymous. Specifics are below.

Based on the verbal and written comments below, there might be cause for a re-examination of the composition of this specific panel and in general, expert panels convened for evaluating possible BMPs for the partnership. As outlined in a detailed summary from Brian Benham and STAC about a year ago, the panels should be technical experts solely and with no vested interests or conflicts of interest. As in the NRC model, suggestions from vested interests and non-experts can be assessed through a panel's opening session where anyone can provide data or insights to the technical experts of a panel. Thereafter, only the panel members with critical expertise and absent conflict deliberate and review the technical literature and derive recommendations.

In the UTC Panel, it seems the requirements for research expertise and non-conflict have been minimized and any outcome would be cast in doubt based on the very limited research expertise and known conflicts. I have been told of similar problems in AG WG-organized panels.

I believe as does STAC that the strength of a review is guaranteed using the NRC model and Brian's earlier interpretation for use in the CBP. Is there a need to set up or revise expert panel protocols for membership/composition of all future panels convened within the partnership? Recommendations from the experts can then be 'revised' in GITs (WQ GIT

always?) thereafter, but the initial review should be as scientifically rigorous as possible without vested interests in the panel.

Kevin

From:

Sent: Wednesday, January 28, 2015 4:21 PM

To: Sellner, Kevin

Subject: Urban Tree Canopy expert panel

Hi Kevin:

Congratulations - again- on making the transition. Good for you!

Thanks too for letting me raise my concern about the urban tree canopy (UTC) expert panel.

By way of background, UTC has been both a darling and a thorn in the urban ecology world, straddling - and polarizing- the practitioner researcher divide.

Let me first say, I Love Trees! I stand second to none in my appreciation for tree lined streets, forested landscapes and the benefits - not least of which are aesthetic and psychological- provided by trees - especially in the urban landscape. Honest!

Let me also say all of the proposed panelists are collegial bright cordial friendly enthusiastic professionals. No axes to grind here - neither personal nor professional.

That said, the panel membership seems unbalanced and heavily skewed to individuals in consulting (both non-profit and for profit consultants) rather than research, all with a very heavy bias and vested interest in finding benefits from "urban tree canopy".

Aside from Susan Day, There seems to be little research expertise in urban forestry, much less forest hydrology, soil physics, or the fate and transport of nutrients in urban soils.

Brian Benham, e.g. is a knowledgeable extension engineer, though urban soils and forestry are not his primary area of expertise, but he is only participating as "panel support"

I think panelists Galvin, Sanders and Clagett would be ideal guests to speak to the panel in its early deliberations about the benefits, municipal challenges and enthusiasm for planting urban trees, and innovative partnerships and programs to advance tree planting goals - with case studies. With their passion and professional interests in promoting the benefits of urban forestry and arboriculture programs, they do not bring research expertise in the science, technology, or engineering issues central to a critical evaluation of urban tree canopy hydrologic or water quality BMP claims. To the contrary; they all bring a vested professional interests in promoting UTC benefits. .

The proposed participation of Dave Nowak as a panel member naturally brings his expertise - and along with it an emphatic defense and advocacy- for the UFORE iTreeproduct that represents a major strategic initiative for the forest service. As the leader of this substantial effort it's appropriate and valuable to have direct access and input from Nowak. The question is whether that should be as a panel member, or as an invited guest or ad hoc ongoing "panel support" to a panel of experienced researchers who do not have a professional bias or interest in the panel outcomes.

To offer some perspective on the voices that should be part of any critical review of the literature on urban tree canopy benefits, I attach a recent article from Frontiers in Ecology, as well as recent correspondence from the journal Environmental Pollution. While the latter is on the subject of UTC atmospheric (rather than stormwater) benefits, I hope this gives you a glimpse of the far from unequivocal views about UTC as an environmental master variable.

To be clear, the qualitative benefits from urban trees are not in dispute. There remains significant appropriate scientific skepticism about the quantitative estimates of aggregate UTC benefits that have been claimed. The perspectives of the collegial enthusiastic serious accomplished scientists who understand these issues and have raised doubts about the wholesale application of planning-level estimates to policy decisions, are not represented on this committee. The omission is conspicuous and reminds me of the exclusion of all academic fluvial geomorphologists from the stream restoration expert panel.

Finally our friends from the CWP are bright, conscientious, sincere engaged professionals, who have also have commercial interests in supporting the Forest serviceproduct development and delivery capacity - e.g. one of three examples of relevant work offered by staff/panelist Capiella.,

I say this to neither denigrate the technical capacities nor question the ethics of any proposed panel members. Rather I raise the concern that this seems like a panel of like-minded practitioner-oriented professionals well-selected for the task of advancing marketing and delivery of tree canopy products to the practitioner community. I admire the enthusiasm and passion - and business opportunities- this panel represents. Unfortunately this is not and should not be this panel's emphasis or outcome.

My judgement is that this imbalance is not the tone, temperament, or expertise we would prefer to see on a technical expert panel whose primary task is (or certainly should be) to provide critical technical evaluation of the science, and literature, to make a technical recommendation that will not be scientifically reviewed or reevaluated by any of the CBP committees that will follow.

To reiterate, The proposed panelists are all serious thoughtful cordial accomplished professionals.

I think it is essential for this panel to seek members who are also clearly well suited to unbiased critical scientific evaluation of the science and technology with less regard and emphasis on advancing the product.

Some serious collegial accomplished scientists with interdisciplinary expertise and the experience and appreciation of putting science into practice who would be welcome members of the panel might include:

M. Todd Walter at Cornell: <http://www.hydrology.bee.cornell.edu/>
Robert Hill, Brian Needleman - University of Maryland <https://enst.umd.edu/people/faculty/bob-hill> <https://enst.umd.edu/people/faculty/brian-needelman>
Martin Doyle, Duke <http://sites.nicholas.duke.edu/martindoyle/publications/>
Greg Characklis, UNC Chapel Hill
Paolo D'Odorico, UVA <http://www.evsc.virginia.edu/dodorico-paolo/>
Gordon Grant - US Forest Service. <http://oregonstate.edu/gradwater/gordon-grant>
Kate Sullivan - US EPA <http://www.epa.gov/athens/staff/members/sullivankate/index.html>
Christina Tague - a superb ecohydrologist at UC Santa Barbara http://www.bren.ucsb.edu/people/Faculty/christina_tague.htm
Anne Jefferson - excellent watershed hydrologist now working on urban hydrology in NE Ohio. <http://all-geo.org/jefferson/>

Thanks again for the opportunity to raise these concerns in a way that I hope will contribute to a more effective credible process..

Offered constructively,

Best,

Response sent 2/3/15

Kevin,

Thank you very much for sharing the comments provided to you by a respected member of the research community. Input from STAC on the composition and operations of the expert panels is critical to further evolution of the independent and scholarly aspects of the BMP panel process. To this end, Virginia Tech (Brian and Jeremy) will work more closely with you and STAC to better target or encourage proposals from relevant researchers for future RFPs issued by Virginia Tech and CBW-ROC. We will send a separate message to you about this effort.

The following e-mail focuses on the comments related to the Urban Tree Canopy (UTC) expert panel composition, as proposed by the Center for Watershed Protection and selected by CBW-ROC.

We have reviewed the comments extensively and greatly appreciate the time and effort to submit the comments, along with relevant articles that provide a critical perspective of the air and water quality benefits associated with urban greenspace. After discussions with the Bay Program, and the Center for Watershed Protection, we propose that the currently unconfirmed panelist (Dave Nowak) not be included on the UTC panel as a

panel member, but rather an invited guest for a meeting or two to share relevant information and lessons from the UFORE model with the panel. Also, two well-respected urban forestry researchers be added to the panel:

Tom Whitlow (Cornell): <http://hort.cals.cornell.edu/people/thomas-whitlow>

Quinfu Xiao (UC-

Davis): http://lawr.ucdavis.edu/directory_facultypages.htm?id=52

*Note: As of this email, Tom has confirmed he can join the panel and Quinfu has been invited. We have another hydrologist researcher in mind in Quinfu is unable to participate.

As noted in the comments you shared, the current proposed UTC panel members have a wealth of consulting experience with local forestry projects and initiatives. We feel it is equally important to have panel members with this kind of practical experience to complement the perspectives and knowledge of researchers. One strength of Virginia Tech and CBW-ROC's RFP process is that it is not strictly limited to academic researchers. Rather, it allows for practitioners and researchers to assemble a team and submit a proposal. These expert panel teams are assembled based on a number of factors in addition to their expertise and experience, such as their ability and willingness to commit their time, their cohesion and their ability to deliver the needed outputs within a predefined, fixed timeframe. In this way, the Center's proposal was very strong, but we agree it can be strengthened by the addition of the two researchers mentioned above. We feel this will better balance the academic and practitioner perspectives on the panel.

We will share this revised, proposed panel membership with the Forestry Workgroup on February 4th. We will ask the Forestry Workgroup to confirm the membership via email, by calling for any final objections or comments by February 11th. If no objections are raised we will consider the membership approved by the Forestry Workgroup and we will convene the panel.

Please let us know if you have any further concerns or questions.

Best,

--Brian and Jeremy

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Brian LeCouteur, MWCOG, 1/29/15

Mr. Hanson:

One comment I have to offer on this effort. I do not see any local government representation on this panel. There are a number of local government foresters in our region that could offer their perspective on practical approaches to UTC efforts and outcomes. Perhaps this has been considered. I understand that panel size is also a consideration. However, I do believe local government participation to be of value for this process.

Feel free to contact me if you or the panel feels this is a legitimate consideration.

Regards,

Brian LeCouteur

Response sent 1/30/15:

Thank you very much for your comment. I agree that practical perspectives based on experience at the local level is important to have for expert panels like this. We are fortunate in this regard because the current panel members have considerable experience working directly with local governments on relevant projects and initiatives.

Once the panel convenes we will host a public stakeholder forum, which will be a great opportunity for you, other locals, and other interested professionals to interact with the panelists and discuss relevant experiences, data, lessons, or projects that could help inform the panel's work. We still have to set a date/time/location for that forum, and we will advertise it through the various CBP groups (the WQGIT and its workgroups, STAC, etc.). Let me know if you would personally be interested in that forum and I'll ensure you receive the information.

Rebecca Hanmer, Chair, Forestry Workgroup, 1/30/15

Jeremy, I am sending you my comments on the UTC BMP Expert Panel proposal. Sally and I have not had an opportunity to discuss these comments, but I wanted to make sure that you received them on time.

1. There does not seem to be any mention of the Forestry Workgroup in the draft Expert Panel statement of work. Was that intentional? The approving group is shown as the Urban

Stormwater Management WG (page 5). I thought FWG was in charge, coordinating with USWG. Not all UTCs will be located in MS4 areas.

Response to comment #1 sent 1/30/15:

In response to Rebecca's first comment, as noted there will be collaboration between the groups. The USWG will be asked to review and comment on the report concurrently with the rest of the partnership, but the FWG is the designated sector workgroup for that step in the approval process, not the USWG. That is how it was intended from the start and when we issued the RFP, but we overlooked that. We will correct that in the table on page 5 in the Statement of Work. Thank you for catching it.

I'll respond to your other comments early next week.

Thank you for providing your comments and have a great weekend.

2. The list of items to be delivered in the statement of work appears to follow closely the guidance for Expert Panels. Has this guidance been updated to include the Expert Panel responsibilities under the BMP Verification Framework? It appears to be compatible, but it's important to check this point.
3. Although the Expert Panel's responsibilities are focused on nutrient and sediment reduction credit to be given for practices, there should be peripheral mention of the other environmental benefits of urban forest buffers. The science of urban trees and other green infrastructure continues to develop, and thus attention to nutrient-sediment reduction characteristics should be placed within the broader context of ecological functioning of urban trees.
4. The word "urban" is limiting and possibly confusing to an ordinary reader, and the geographic range of "urban tree canopies" covered by the Expert Panel should be noted. In the context of the Chesapeake Bay Program, I believe that an "urban tree" is any tree not located on agricultural or forest land. Thus, it may be located in an urban area, as commonly understood, or it may be located in any developing area or even relatively undeveloped areas, such as the fringe of towns or parks. Do these different types of locations have an impact on the nutrient-sediment reduction performance of an urban tree? Also, are we distinguishing between different types of "canopies" (that needs also to be defined). Is it possible that "community tree" is better than "urban tree?"

Those are my comments, Jeremy. Best wishes to you, Rebecca

Response to comments #2-4 sent 2/3/15:

Thank you for your thoughtful comments, Rebecca.

#2 – We expect that the next round of revisions to the BMP Protocol will clarify the role of the panels, and provide more explicit directions, regarding their recommendations on BMP verification for the BMPs they are evaluating. All new expert panels are expected to consider BMP verification and to provide basic guidance for the jurisdictions so they are able to develop and implement appropriate BMP verification procedures to ensure the practices that they report are installed and functioning in the real world. That said, the

panels are primarily comprised of scientific experts that may not have extensive knowledge or familiarity with the states' current verification efforts. The panels will provide their best guidance as technical experts, but it is up to the states to develop or enhance their programs according to their BMP priorities, program capacity and other factors.

#3 –To clarify, this panel will not be looking at “forest buffers” in the sense of riparian forest buffers. The panel will define “urban tree canopy” as a distinct BMP according to explicit definitions that can be implemented, tracked and reported by the jurisdictions. As instructed in the BMP Protocol, the panel is indeed charged to consider unintended consequences and ancillary benefits that may be associated with the BMP aside from its effects on nitrogen, phosphorus and sediment loads.

#4 – This is an excellent point, and the panel will make recommendations that clearly define which land uses the BMP can be applied to in the Chesapeake Bay Program partnership modeling tools. The panel can assess whether the land use where the BMP is located has an effect on its nutrient or sediment reducing effectiveness, but I am unable to make that determination myself. If the panel distinguishes between different types of canopies, they will explain that in their report. The suggestion to use “community tree” instead of “urban tree” is a good one that we will suggest to the panel when it convenes.

Greg Busch, MDE, 2/2/15

Hi Jeremy-

I know that Dinorah has been in contact with you regarding our comments on the urban tree canopy BMP expert panel.

First off, I would like to thank you for your work in assembling the urban tree canopy expert panel. Given the important hydrologic and nutrient removal impacts of tree cover, this practice offers tremendous potential toward improving how we manage our urban watersheds.

Since the interactions between tree canopy and the urban environment are incredibly complex and touch on work being done in so many fields, we believe that there is value in expanding the membership of the urban tree canopy expert panel to include a couple of additional related disciplines.

One group that should be included in the panel---beyond just as panel support---is the state stormwater regulatory community. Tree canopy is one of the developing techniques for urban stormwater management, and bringing someone in with extensive experience in the regulatory sector would help ensure that our approach to tree cover is consistent with how we holistically evaluate stormwater management.

The second addition we would like to see is an academic researcher with a focus on urban hydrology, but whose research has been outside of forestry and tree canopy issues. This would provide better balance to a panel that is composed largely of tree canopy and forestry experts. Adding this type of expertise would hopefully lend more weight to the findings of the expert

panel and increase that likelihood of the panel's recommendations being adopted by the broader watershed management community.

Let me know if you have any questions.

Response sent 2/3/15:

Thank you Greg. We appreciate the time and effort from you and your MDE colleagues to provide these comments. We agree that tree cover offers critical opportunities to improve urban watersheds, and commend efforts that Maryland and its communities are taking in that regard.

We agree that the regulatory community offers invaluable insights for this expert panel, but feel the regulatory support person (Ken Hendrickson, EPA Region 3) is sufficient to cover these perspectives, and trust that he is well versed in relevant regulatory programs across the jurisdictions. In his support role he will respond to regulatory questions or issues as they arise, and if necessary he can work with the Panel Coordinator to solicit more detailed answers or information from the jurisdictions. The Watershed Technical Workgroup Representative (Marcia Fox, DE DNREC) is not limited to providing her insights on tracking or reporting issues. Her experience and insights will supplement Ken's and provide additional input from a state's perspective.

We are currently working to secure a commitment to join the panel from a well-respected researcher with extensive and relevant hydrology experience:

Quinfu Xiao (UC-Davis): http://lawr.ucdavis.edu/directory_facultypages.htm?id=52

Note: As of this email Dr. Xiao has been invited and we are awaiting a confirmation. We have another hydrologist researcher in mind if he is unable to participate.