

I. Background and Purpose

Since 2003, it has been the policy of the Chesapeake Bay Program partners to increase urban tree canopy cover for water quality and other benefits. This was reaffirmed and strengthened in the 2014 Chesapeake Bay Agreement Tree Canopy Outcome. As part of the CBP partnership's efforts to refine land use classifications in the Phase 6 model, the Forestry Workgroup has been coordinating the effort to include Tree Canopy land uses and associated loading rates in the Phase 6 model. Some of the key reasons for including Tree Canopy land uses include the following:

- Urban tree canopy is the preferred land cover for water quality in developed areas, yet its benefits are not directly accounted for in the CB Model; thus retaining tree canopy has no "value" in the TMDL framework, whereas Forest, Open Space, and other preferred land uses do
- Including Tree Canopy land uses in the model improves the ability of jurisdictions to track and manage tree canopy changes over time, towards meeting watershed goals; this is important for the TMDL as well as Bay Agreement Tree Canopy Outcome
- Tree Canopy meets the CBP criteria for Land Uses - 1) can be mapped, 2) has loading rates specific to that land use, 3) has distinct best management practices associated with the land use (addition of new tree canopy cover to turf and impervious areas)

Key Progress to Date: (note I will insert hyperlinks to docs)

- Dec. 2014 - WQGIT approved inclusion of tree canopy in Phase 6 land use classes, pending determination and approval of loading rate
- Three Tree Canopy land uses were mapped for inclusion in initial Oct. 1 2015 model calibration 1) TC over impervious, 2) TC over turf, 3) TC over open space; see Land Use Workgroup memo addressing TC mapping considerations
- Sept. 2014 - Urban Tree Canopy Expert Panel provided Technical Memo with recommended loading rates, supported by Literature Synthesis document; FWG approved recommendations and presented to USWG; USWG reviewed and provided comments
- Sept 28 WQGIT decision to include Tree Canopy land uses in Oct. 1 calibration without unique loading rates and revisit after Expert Panel Final Report goes through partnership approval process

II. Summary of Key Issues to address

1. SCIENCE: Bolster scientific justification for loading rates/BMP efficiency (**LEAD: Expert Panel**, w/ FWG and stakeholder input)
 - a. Interception
 - b. Runoff Reduction – 1-to-1 assumption
 - c. Infiltration and transpiration

- d. Address BMP efficiency for tree planting/expanded canopy (to capture new tree plantings on annual basis, between TC land use updates)
- 2. MODELING: Address questions about how Tree Canopy land uses should be incorporated into model (**LEAD: FWG** coordinates with workgroups)
 - a. Relation of Tree Canopy LU to other Land Use/Loading Rates (Olivia's loading ratios)
 - b. Relation of Tree Canopy LU to other stormwater BMPs ; how BMPs will be applied to new land uses
 - c. Question of transpiration credit for TC over impervious; interflow modeling
- 3. MAPPING: Confirm that TC mapping questions have been answered (**LEAD: FWG/LUWG**)
 - a. Revisit LUWG memo and Virginia's mapping questions
- 4. POLICY/PROGRAMMATIC: Address other jurisdiction questions/concerns beyond technical issues above (**LEAD: FWG** with input from Expert Panel BMP Recommendations and stakeholders)
 - a. How might having TC land uses impact loadings and future load reduction requirements
 - b. Clarify connections between Tree Canopy LU and BMP credit and reporting requirements
 - c. Clarify connections between Tree Canopy LU/BMP in model and the CBP Tree Canopy Outcome/tracking
 - d. Others as needed...

III. Stakeholder Coordination/Communication plan and timeline

- 1. Work to address key issues with key workgroup representatives, in coordination with Expert Panel process (includes science/modeling/policy issues above and others that arise)
 - a. FWG and Expert Panel (Jeremy) will coordinate with workgroup Chairs/Coordinators to provide ongoing updates and get feedback on issues
 - b. Expert Panel/FWG exploring contracting with an analyst to focus on the loading rate science/recommendations from Dec.-April
 - c. FWG will work with technical contacts in December and as needed to assist with working through and coming to agreement on modeling/science/technical issues
 - i. USWG – Tom Schueler
 - ii. LUWG – Peter Claggett
 - iii. Modeling WG – Lee Currey
 - iv. Expert Panel – Jeremy, Neely
 - v. Others as needed...Olivia Devereux, Jeff Sweeney, Gary Shenk, etc....
- 2. Provide updates and get input on Tree Canopy Land Use/Loading Rates issues at the following workgroup/GIT meetings: [insert dates]

3. Work directly with jurisdictional representatives to address specific concerns (**LEAD: FWG**)
 - a. Phone calls with key jurisdiction representatives to work through questions and concerns (WQGIT, and as needed USWG, MWG, WTWG, MB)
4. As needed, run modeling scenario(s) for a pilot area (DC or MD?) to scope out impact of TC land uses and proposed loading rates

IV. Timeline

Meeting Schedule – To be filled in – aim to present revised TC loading recommendations/justification at February and March workgroup meetings for approval by April if possible

Forestry Workgroup

Urban Stormwater Workgroup

Modeling Workgroup (MWG)

Watershed Technical Workgroup

Water Quality GIT