

Tree Canopy Land Uses for the Phase 6 Watershed Model

Sally Claggett, US Forest Service

Neely Law, UTC Panel Chair, Center for Watershed
Protection

Jeremy Hanson, UTC Panel Coordinator, Virginia Tech

Peter Claggett, USGS

Today's requested decision

- Ask FWG to vote on a recommendation to the WQGIT for the tree canopy land uses to include in the Phase 6 Watershed model. WQGIT meeting August 10th
- We are not presenting loading rates for tree canopy land uses.
 - Quantifying the water quality loading effects of tree canopy in order to assign a relative loading rate needs additional time for workgroup and CBPO discussion.

Role and Input from Urban Tree Canopy Expert Panel

- The Urban Tree Canopy (UTC) panel continues to focus on how to define tree canopy as a BMP and quantify the water quality benefits associated with urban trees and plans to deliver its full report of recommendations later this year.
- UTC expert panel agrees that tree canopy has significantly different hydrologic impacts when it is over impervious surfaces relative to canopy over pervious areas.
 - Limited to quantify water quality benefits based on different types of pervious or impervious cover below tree canopy (e.g. road vs parking lot vs building)
- Expert panel supports development of two tree canopy land uses
 - over impervious
 - over pervious
- UTC panel itself is not charged with developing the land uses or loading rates, but has contributed to discussions with CBPO staff.

Tree Canopy over Impervious (TCI)

- a. Small or narrow patches of trees (or the edges of forests for areas mapped with regional land use data) that cover all types of impervious surfaces, e.g., street trees.
- b. Located within developed areas: residential, commercial, industrial, institutional, and recreational areas and proximal to rural buildings and other structures.
- c. Understory dominated by roads.
- d. Nutrient and Sediment Loads = some fraction of loads for “Impervious-Roads” land use.
- e. Included in the “Developed” macro land use class.

Tree Canopy over Herbaceous (TCH)

- a. Small or narrow patches of trees (or the edges of forests for areas mapped with regional land use data) with an herbaceous understory, e.g., turf grass and landscaped areas.
- b. Located within developed areas: residential, commercial, industrial, institutional, and recreational areas and proximal to rural buildings and other structures.
- c. Understory dominated by turf grass.
- d. Nutrient and sediment loads = some fraction of loads for “Turf Grass” land use.
- e. Included in the “Developed” macro land use class.

Tree Canopy over Scrub-Shrub

- a. Small or narrow patches of trees (or the edges of forests for areas mapped with regional land use data) with a scrub-shrub understory, e.g., wind breaks, trees in the median of divided highways, narrow riparian buffers, and trees in pasture/cropland.
- b. Located in rural areas that are largely agricultural.
- c. Understory dominated by scrub-shrub.
- d. Nutrient and sediment loads = some fraction of loads for “Open Space” land use.
- e. Included in the “Natural” macro land use class.

Developed

Tree Canopy
over Impervious
&
Tree Canopy
over Herbaceous

Forest

Tree Canopy
over Scrub-Shrub

Forest