

Regional Tree Canopy Goals and Metrics

**Regional Tree Canopy Subcommittee
Presentation to
Planning Directors Technical Advisory Committee**

October 15, 2021

Overview

- Provide context/background
- Overview of Tree Canopy Goals and related Metrics
- Seeking comments from PDTAC by November 1, 2021

Regional Tree Canopy Subcommittee

- January 2019 - CEEPC Resolution to COG Board forming a regional tree canopy committee
- February 2019 - COG Board endorses establishment of Regional Tree Canopy Subcommittee (RTCS) of CEEPC charged with:
 - ❖ Protecting, managing, and expanding urban forestry assets for health and quality of life;
 - ❖ Optimizing urban forestry programs;
 - ❖ Developing a regional urban forest action plan and canopy goals;
 - ❖ Inspiring the community to take ownership of efforts to protect and expand urban forests;
 - ❖ Integrating urban forestry with Region Forward and meeting Chesapeake Bay water quality goals.



Tree Canopy Management Strategy Report



Report Structure

Recommendations for Tree Canopy Goals and Metrics for the Metropolitan Washington Region

- A Tree Canopy Goal for our Region
- Tree Canopy Goals based on Population Density
- Tree Canopy Goals by Land Uses
- Metrics to evaluate success
- Appendices

Recommended Tree Canopy Goals for the Metropolitan Washington Region

The Regional Tree Canopy Subcommittee recommends a minimum regional canopy goal of 50%

- An aspirational recommendation – not regulatory
- A regional goal will be an effective tool for:
 - ❖ Marketing a simple message about the value of conserving and managing trees
 - ❖ Engaging the public
 - ❖ Motivating local policy makers and officials
 - ❖ Securing funding and resources
 - ❖ Strengthening local tree programs through enhanced regional collaboration
 - ❖ Providing a baseline for future analyses

Recommended Tree Canopy Goals for the Metropolitan Washington Region

The Regional Tree Canopy Subcommittee recommends a minimum regional canopy goal of 50%

- Similar to current canopy level (53% in 2013)
- Acknowledges future growth and housing needs
- Acknowledges need to conserve other natural systems and agricultural uses
- Premised on 2013 canopy levels identified by the Chesapeake Conservancy
- Offered in support of broader Regional Forward Goals to improve environmental quality and quality of life
- Canopy Goals and Metrics are offered as “living” recommendations that should be reevaluated periodically to account for future trends, needs, threats and opportunities

Tree Canopy Goals Based on Population Density

- 2013 data was used to develop smaller-scale recommendations that relate to density of human population and broad land use categories
- Offered as a resource to help local governments generate or modify existing goals for areas such as political sub-boundaries, watersheds, planning districts, or entire jurisdictions
- Goals for population densities can be used at local and regional level for land use and planning efforts
- Goals extrapolated from 2018 Federal Census data and 2013 Chesapeake Conservancy data
- Goals consider opportunities to conserve existing forested areas and expand canopy levels through tree planting
- Different goals are provided for urban, suburban, and exurban conditions

Density of Human Population per Square Kilometer	Broad Land Use Description	Average Canopy % (2013)	Minimum Canopy Goal	Preferred Canopy Goal
CITIES & TOWNS				
>3,000 /km ²	Densely Urbanized	33.5%	35%	40%
>1,500 to 2,999/km ²	Urbanized	39.2%	40%	45%
< 1,500/km ²	Suburban/Residential	38.5%	45%	55%
COUNTIES				
>2,000/km ²	Densely Urbanized	40.2%	35%	45%
1,000 to 2,000/km ²	Urbanized	56.7%	55%	60%
700 to 999/km ²	Partly Urbanized	56.3%	55%	60%
300 to 699/km ²	Suburban/Residential	50.4%	55%	60%
<299/km ²	Exurban (areas w/considerable abandoned agriculture)	54.9%	50%	55%
<299/km ²	Exurban (areas w/considerable active agriculture)	44.8%	40%	45%



Tree Canopy Recommendations for Land Uses

- Goals based on mature tree canopy levels
- Includes coverage of individual and blocks of trees over impervious and pervious surfaces, including ground and rooftop locations
- Derived from 2013 land cover and tree canopy levels analyzed at the parcel level
- Goals identified for 15 broad categories of land use
- Offered as a resource to assist local governments in individual land use decisions and natural resource planning efforts

Tree Canopy Recommendations for Land uses

Land Use	Examples and Notes	Canopy Goal
Residential, Low	Detached homes, either single-family or duplex	60%
Residential, Medium	Attached homes, such as townhomes or single/double story multi-family buildings	40%
Residential, High	High rise condominiums and apartment buildings	25%
Commercial, Low	Single or double-story buildings, sometimes with parking lots	40%
Commercial, Medium	Multi-story buildings, with parking lots or small parking garages	25%
Commercial, High	High rise commercial	20%
Mixed Use	Commercial mixed with residential or other compatible uses	25%
Industrial, extractive & railway	Manufacturing, quarries/asphalt/concrete plants, and railways	20%
Park, low development	Natural parks with trails, and minimal constructed facilities	80%
Park, Medium development	Passive recreation such as cemeteries, gardens, and golf courses	40%
Park, High development	Sports fields, paved plazas, heavy traffic urban parks with high density of buildings	30%
Local Roads	Serving residential and connecting small residential roads - low speeds	20%
Arterials	Transportation within a local community - medium speeds	15%
Freeways & highways	Transportation through communities and states - high speeds	15%
Airports	Consider buffer tree areas and areas around departure/arrival zones	10%
Agricultural	Consider stream buffers and road buffers	25%

Metrics to Evaluate Success

- Percent of tree canopy is not the absolute measure of success
- Qualitative metrics are needed
- Forest health
- Biodiversity
- Social equity
- Levels of environmental, socio-economic services provided by canopy
 - ❖ Air quality
 - ❖ Energy conservation in homes
 - ❖ Ambient air temps
 - ❖ Carbon sequestration/storage

Next Steps

- Receive comments from PDTAC by November 1, 2021
- Incorporate PDTAC input into recommendations
- Presentation of a final draft report to CEEPC
- Incorporate the goals and metrics into a forthcoming Regional Tree Canopy Management Plan
- Explore:
 - Possible inclusion of goals and metrics into Regional or Local Climate Action Strategies
 - Link to other COG regional priorities
 - Possible future presentation to Region Forward or COG Board for consideration

Mike Knapp

Tree Canopy Management Subcommittee Chair
Montgomery County DPS
(240) 777-6335
Michael.knapp@montgomerycountymd.gov

Brian LeCouteur

Principal Environmental Planner
Regional Urban Forester / Agricultural Programs Manager
(202) 962-3393
blecouteur@mwkog.org

mwkog.org



Metropolitan Washington
Council of Governments

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