

Local Government Advisory Committee Meeting

March 17, 2023



Tree Canopy Update

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The screenshot shows the homepage of the Chesapeake Tree Canopy Network. The header is dark blue with the logo on the left and navigation links on the right. The main content area has a light blue background with a large aerial photo of a city street. A text box on the left welcomes visitors and explains the network's purpose. A smaller text box on the right highlights a feature about the Baltimore Tree Trust. At the bottom, there's a dark blue bar with a call to action and links to sign up or view newsletter archives. Below this is a section for 'Tree Canopy Initiatives' featuring a map with search and style controls. A yellow banner at the bottom right displays the website URL.

Chesapeake Tree Canopy Network

SIGN UP NEWSLETTER ARCHIVE ABOUT US CONTACT US CHESAPEAKEFORESTBUFFERS.NET

WHY TREE CANOPY? UNDERSTAND YOUR CANOPY EXPAND YOUR CANOPY MAINTAIN YOUR CANOPY

Welcome to the Chesapeake Tree Canopy Network

Connecting you with resources, stories, and best practices to understand your canopy, expand your canopy, and maintain your canopy. Learn about and make the case to others why tree canopy is so critical to a healthy, vibrant Chesapeake Bay watershed. We are building this resource as we go, so please send your ideas and suggestions for making the network most helpful.

Baltimore Tree Trust: Doing More Together

[Read More](#)

Get updates on tree canopy news and events! SIGN UP NEWSLETTER ARCHIVES

Tree Canopy Initiatives

Find local tree canopy assessments, goals, and urban forestry contacts.

My Style Map Address Search

www.chesapeaketrees.net

chesapeake network

Looking to participate in the tree canopy conversation? Join our group on the Chesapeake Network. Need help joining, posting, or have questions? Check out our [help guide \(PDF\)](#).

CREATE VIBRANT COMMUNITIES

- 1 Incorporating trees into common spaces in public housing increases social activities.¹
- 2 Having larger trees in yards and on the street can improve home values by 3%-15%.²
- 3 Shoppers will spend 9%-12% more in areas with better tree canopy.³

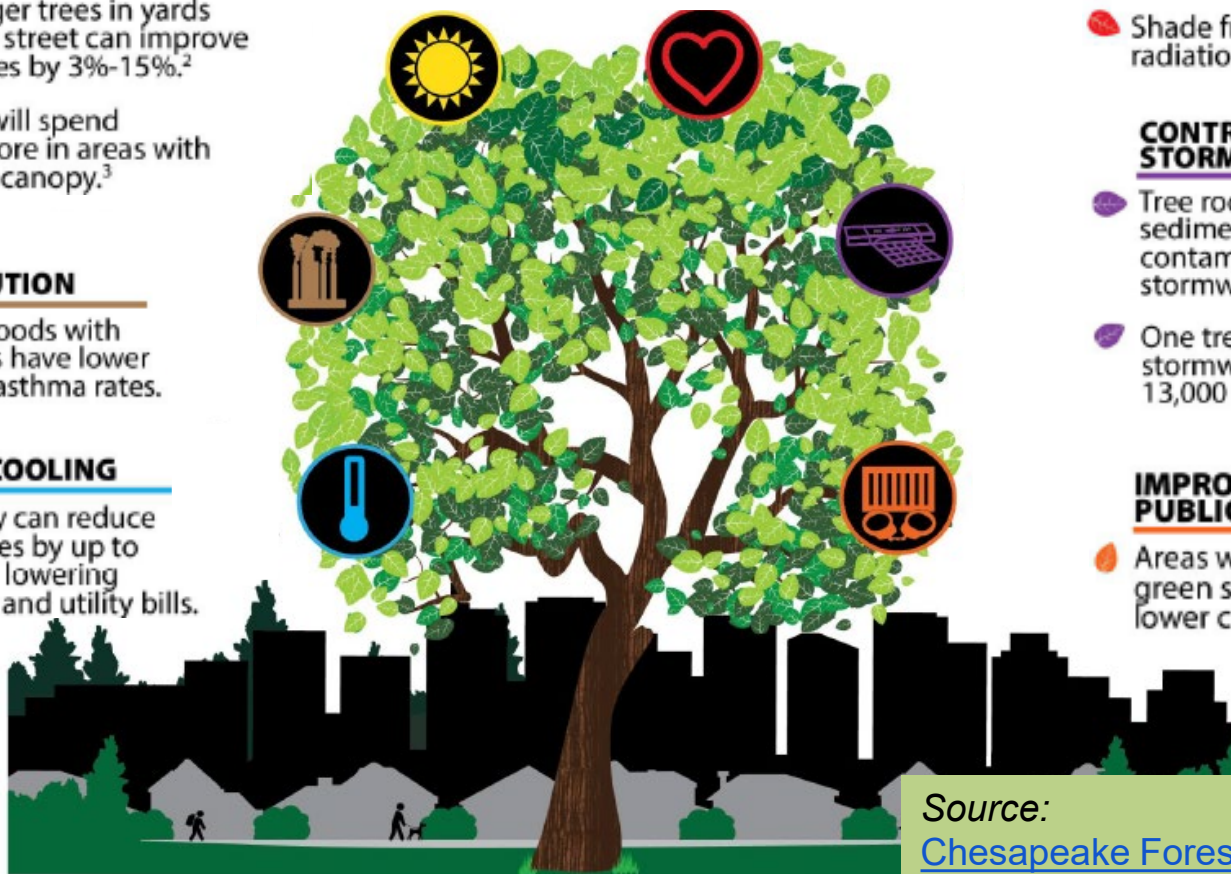
REDUCE AIR POLLUTION

- 4 Neighborhoods with lots of trees have lower childhood asthma rates.

PROVIDE SHADE & COOLING

- 5 Tree canopy can reduce temperatures by up to 20 degrees, lowering health risks and utility bills.

TREES in COMMUNITIES



IMPROVE HUMAN HEALTH

- 6 Trees help reduce stress, lower blood pressure, and boost the immune system.
- 7 Shade from trees reduces radiation that causes skin cancer.

CONTROL STORMWATER

- 8 Tree roots can trap sediment and filter contaminants from stormwater.
- 9 One tree can reduce stormwater runoff by 13,000 gallons per year.⁴

IMPROVE PUBLIC SAFETY

- 10 Areas with increased green space have lower crime rates.³

Source:

[Chesapeake Forest Restoration Strategy](#)

How Decades of Racist Housing Policy Left Neighborhoods Sweltering

By Brad Plumer and Nadja Popovich
Photographs by Brian Palmer Aug. 24, 2020



Learn more: [Heat, Health & Trees Session](https://www.nytimes.com/interactive/2020/08/24/climate/racism-redlining-cities-global-warming.html), Chesapeake Watershed Forum;
<https://www.nytimes.com/interactive/2020/08/24/climate/racism-redlining-cities-global-warming.html>

Through the Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program has committed to...

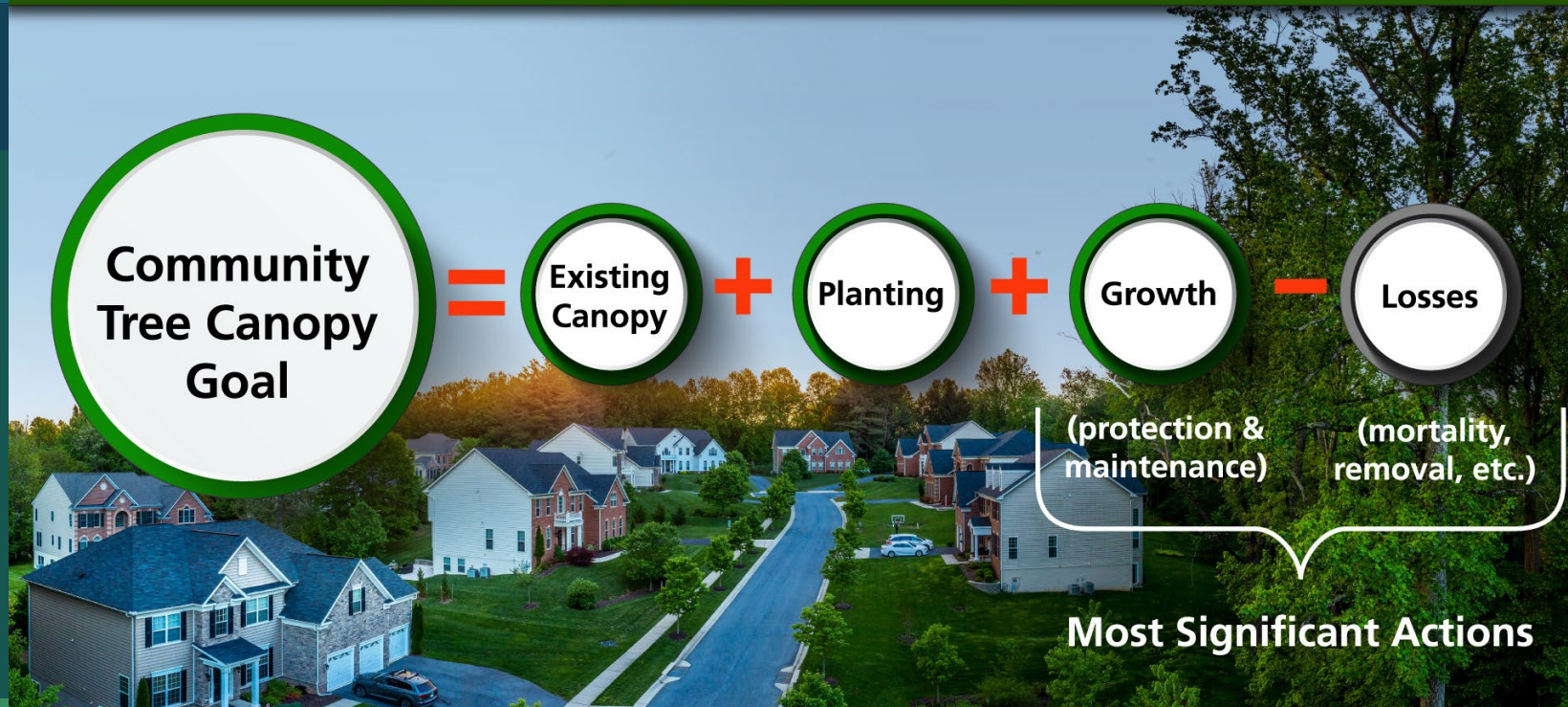


Goal: *Vital Habitats*

Outcome: *Tree Canopy*

Continually increase urban tree canopy capacity to provide air quality, water quality and habitat benefits throughout the watershed. Expand urban tree canopy by **2,400 acres by 2025.**

Achieving a Canopy Goal: It's not just about planting . . .

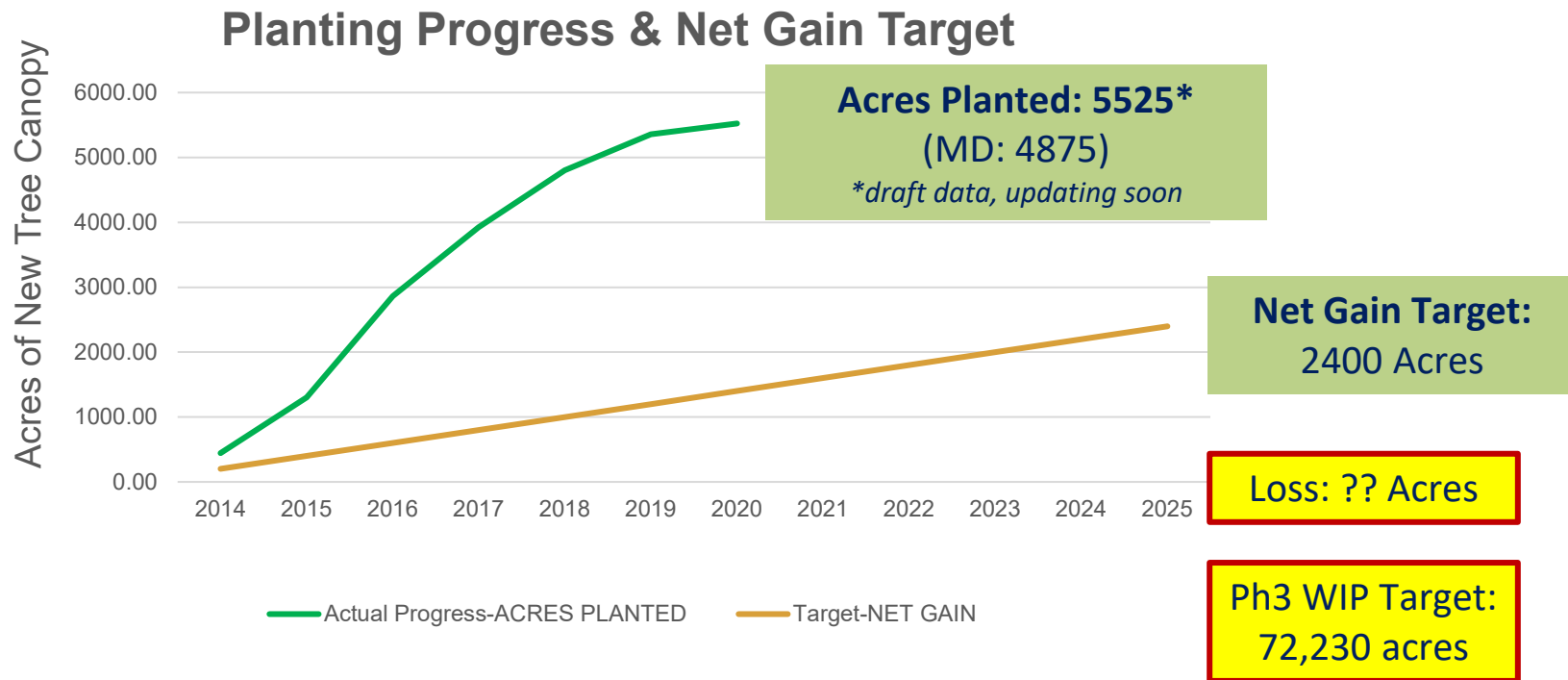


Tree Canopy Indicator has 2 components:

- 1) States report three urban tree planting BMPs annually for TMDL
- 2) Long term progress analyzed through CBP Land Cover updates (2022)



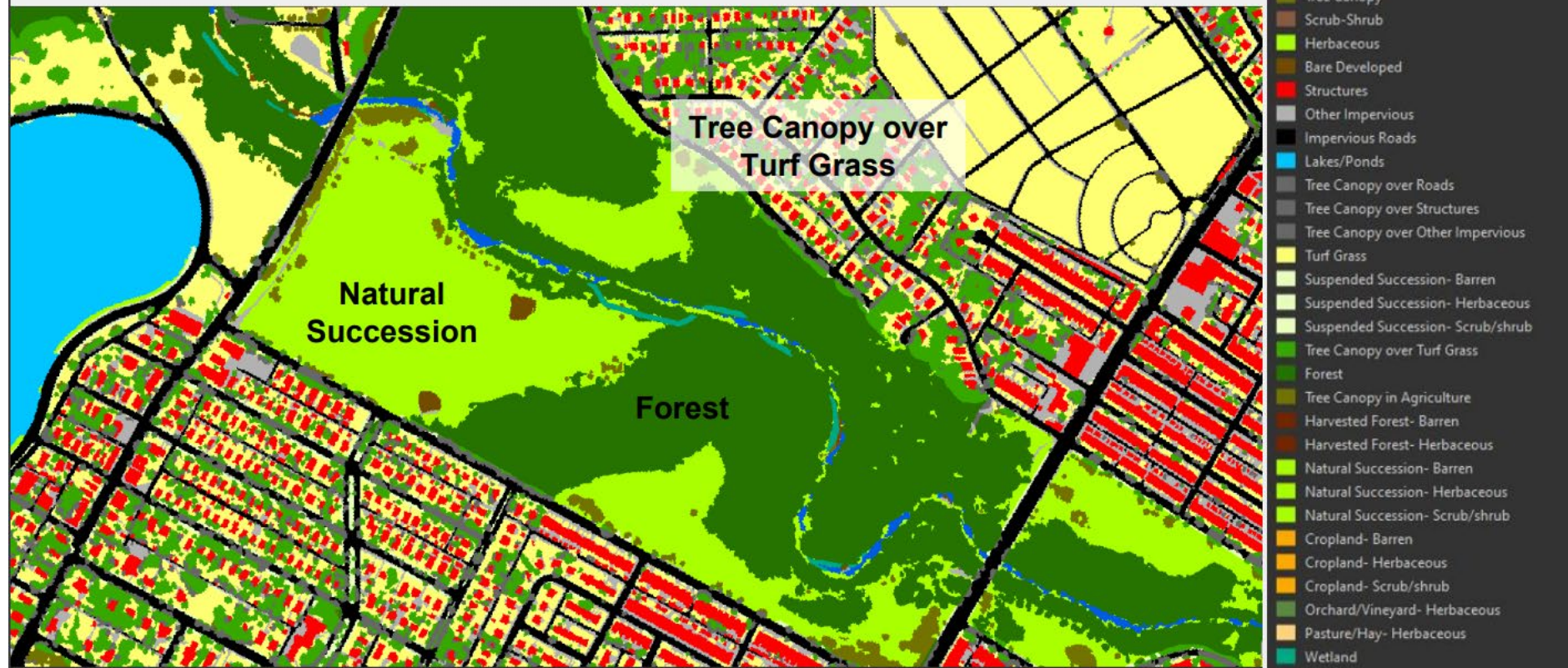
What is our Expected and Actual Progress?



CBP Land Use/Land Cover Change: 2013/14 – 2017/18

- Valuable high-resolution data help us track tree cover gains and losses
- Preliminary (version 1) change data showed **30,000+ acres net loss** of tree cover on developed and developing lands across the watershed
- Final data coming this Spring, in several forms:
 - **County Tree Cover Status & Change Fact Sheets** (next step, Municipal)
 - Bay-wide Status & Change Report, Story Map
 - Full GIS datasets, map viewers, change data tables, etc. (Chesapeake Conservancy)

2017/18 Land Use/Land Cover (18 class, Baltimore City)



Tree Cover Status and Change for Cumberland County, PA

41.6%

*Total percent of
county with
tree cover*

\$14+ million

*Annual benefits
provided by tree cover
(in reduced air pollution,
stormwater, and carbon)*

433 acres

*Net loss of tree
cover in 4 years
(2013 to 2017)*

What are some benefits of tree cover in your county?



Total Air Pollution³ Removal Value

9,665,973 lbs removed annually
\$9,162,946 saved annually

3. Total air pollution removal includes CO,
NO2, O3, PM2.5, SO2, and PM10.



Gallons of Reduced Stormwater Runoff Value

560,088,604 gallons reduced annually
\$5,004,953 saved annually

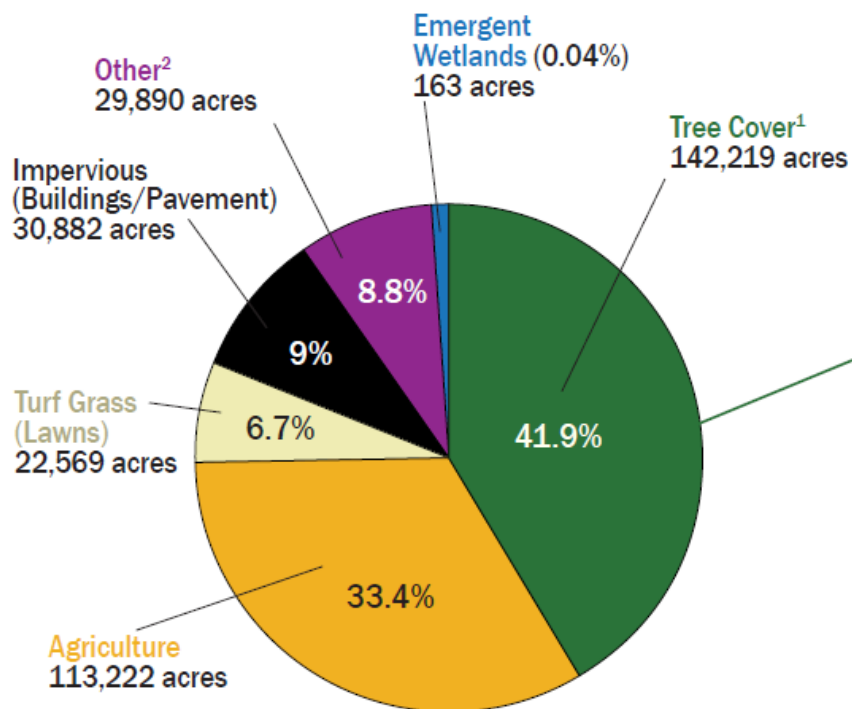


Carbon Sequestered Value

120,250 tons removed annually
\$10,594 saved annually

What is the land use/land cover breakdown in your county?

(based on 2017 high resolution imagery)



341,668 acres of land in Cumberland County in 2017

Where does tree cover occur in your county?



82% is in forest
(116,180 acres)



11% is over turf grass
(15,762 acres)



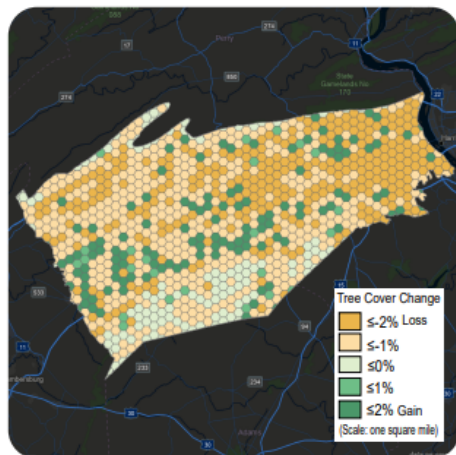
1% is over impervious
(2,128 acres)



6% is other tree cover
(8,149 acres)

1. Tree cover includes all trees occurring on all land uses, such as individual trees found over turf, impervious, agricultural, wetlands, or other lands. It also includes areas of "forest," defined in this dataset as patches of tree cover 1 acre or greater, with a minimum patch width of 240 feet.

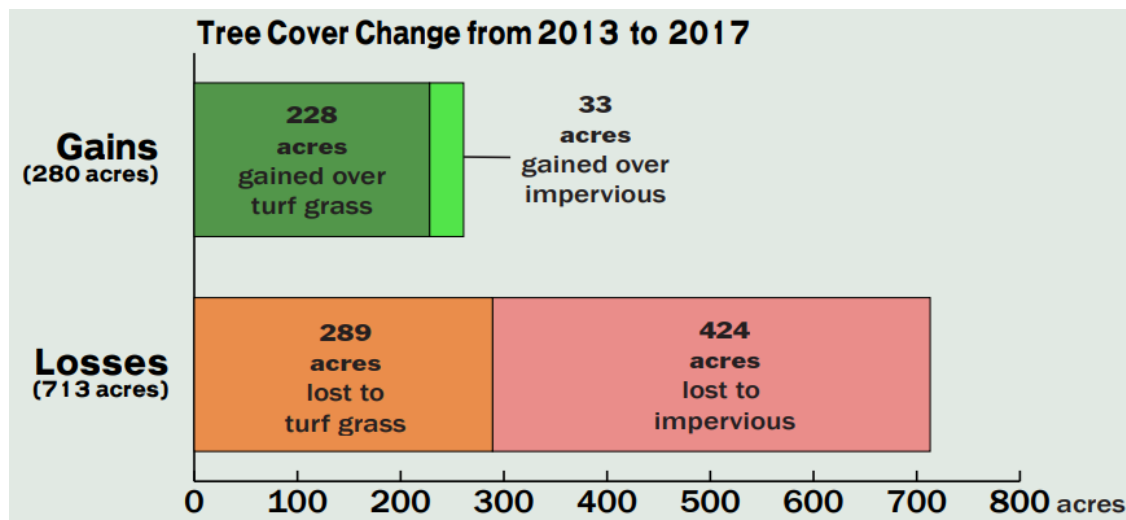
How is tree cover changing on developed and developing lands?



Tree Cover Change, Cumberland County,
Pennsylvania

Understanding **how your tree cover changes over time** can inform the **sustainable management** of forests and community trees. The map to the left shows where your county has lost and gained tree cover from 2013 to 2017.

- Tree cover can be **lost quickly** due to human activities (e.g. construction) or natural events (e.g., severe weather).
- Tree cover can be **gradually increased** through tree planting and natural regrowth, but maintaining this new growth requires long-term investments.
- Since mature, healthy trees provide significantly greater community benefits than newly planted trees, it is important to both preserve existing tree cover and seek opportunities to grow new trees and forests. Local [land use planning](#), [ordinances](#), and [tree programs](#) play a critical role!



Coming soon...
(when data are released)

Learn More:

Chesapeake Tree Canopy Network

Links to county fact sheets, user guides, map viewers, datasets, and more

Tree Equity Score

Explore maps of how tree benefits are distributed across communities

Capitalizing on the Benefits of Trees

A slideshow for local leaders featuring tree benefits, case studies and resources

State Urban and Community Forestry Assistance

(State contact and website)



chesapeaketrees.net

Find your score and help create
Tree Equity in cities and towns
across America.

MENU ▾

MAP

Search for your town



Tree Equity Score

A map of tree cover in any city in the United States is too often a map of race and income. This is unacceptable. Trees are critical infrastructure that every person in every neighborhood deserves. Trees can help address damaging environmental inequities like air pollution.

The score evaluates data from each neighborhood's:



Existing tree
canopy



Population
density



Income



Employment



Surface
temperature



Race



Age



Health

TREE EQUITY SCORE

78
/ 100



These metrics are combined into a single score between 0 and 100. A score of 100 means that a neighborhood has achieved Tree Equity. To learn more, visit our [methodology page](#).



NATIONAL
EXPLORER

Search for your town



Landover Hills

Municipal report →

MD Congressional District 4

Census Block Group 240338035091

22

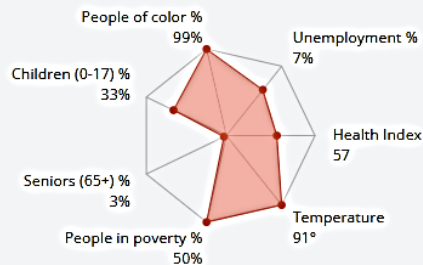
Tree Equity Score

RANK

8th of 8 blockgroups in
Landover Hills

Score indicators

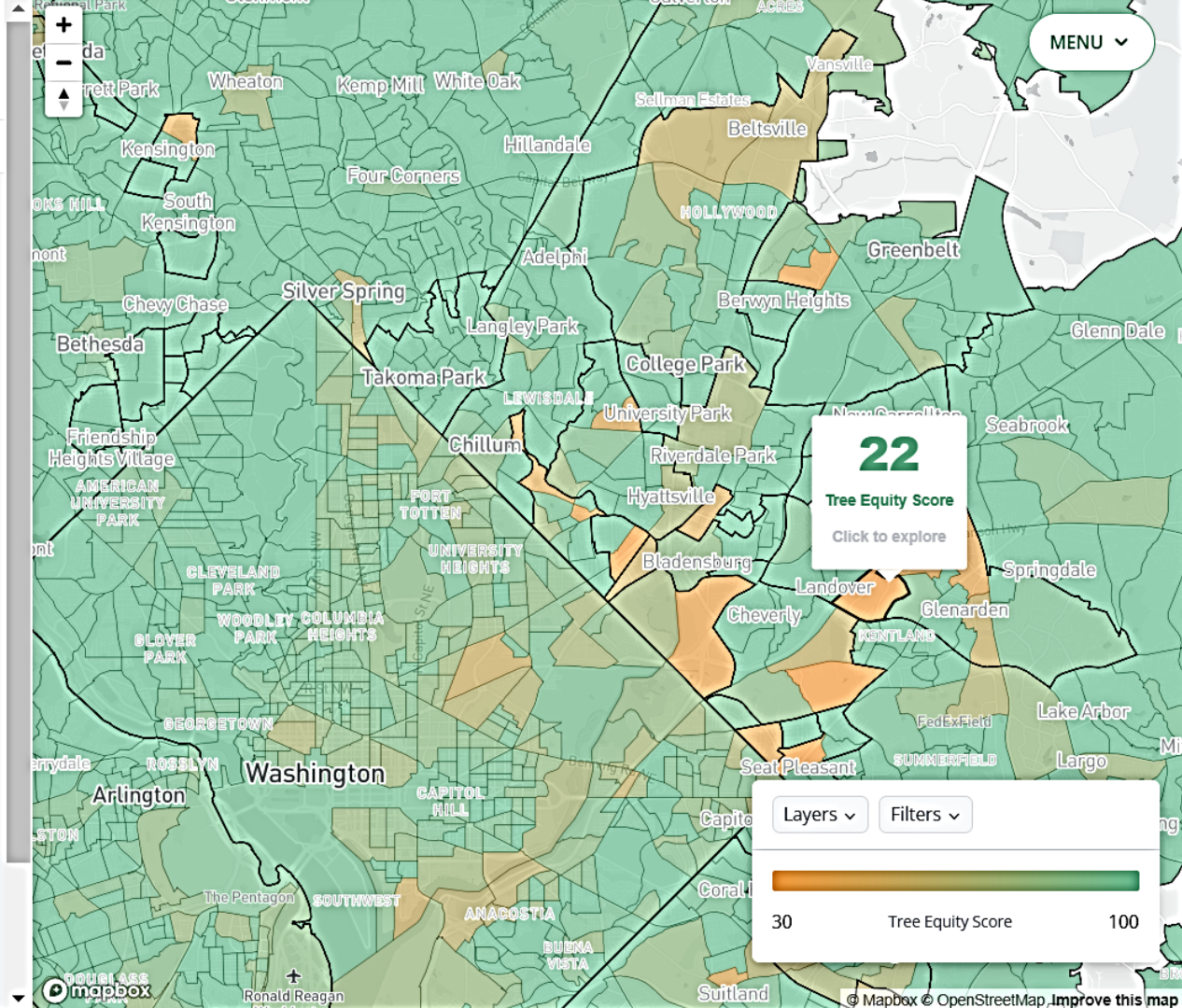
Priority index



Canopy cover goal: 48%



Current canopy cover: 28%



A Local Government Guide to the Chesapeake Bay

CAPITALIZING ON THE BENEFITS OF TREES

A Local Government Guide to the Chesapeake Bay is a seven-module series created to support decision making by local officials. As a local leader, your decisions set the course for your community. Your actions determine the health and vitality of your jurisdiction, as well as that of local waterways and the Chesapeake Bay. You can achieve win-win outcomes by prioritizing local economic development, infrastructure resiliency, public health, and education while also protecting your environment. This fact sheet accompanies a module about the benefits of community trees.

TREES IN YOUR COMMUNITY

Community trees improve the local economy, public health and safety, community infrastructure, and education.



Trees have positive economic impacts, including increasing the value of real estate, lowering energy costs, providing services (like flood protection), and elevating tourism through outdoor recreation, a **\$63.2 billion** industry in the watershed states alone.



Trees filter pollutants from water and air, keeping our communities healthy. They also provide shade to lessen extreme temperatures in urban heat islands. Lastly, they boost your community's wellbeing by reducing mental fatigue and aggression, encouraging exercise, and bringing people together outdoors.



One acre of forest produces **36 times** less runoff than one acre of parking lot. The water that is absorbed and filtered reduces the risk of damage to community infrastructure through flooding and decreases the amount of pollution entering local waterways.



Access to trees and nature improves academic performance, creativity and problem solving, focus and engagement, enthusiasm for learning, and impulse control.

[View full module](#)

...strategically
waterways.
off into
local waterways and can help meet Municipal
Separate Storm Sewer System (MS4) requirements.



Tree canopy is the area of the leaves of a tree or group of trees. Take stock of the tree canopy you currently have and make a goal. In order to achieve a tree canopy goal, factor in the pieces of this equation:

$$\text{Achieving a tree canopy goal} = \text{Existing canopy} + \text{Planting} + \text{Growth (protection \& maintenance)} - \text{Losses (mortality, removal, etc.)}$$

Use the resources on the next page to find more information about funding, best practices, and more. See the module slides for a case study about tree canopy potential on school grounds in West Virginia.

Photo by W. Parson/Chesapeake Bay Program

PROTECT YOUR COMMUNITY

WHAT YOU CAN DO



Establish a tree canopy goal for your community. Engaging residents in creating and implementing a tree plan inspires them to be better stewards of their community.



Explore and diversify funding opportunities, like state and federal grants, stormwater management fees, and parks and recreation department funds, to ensure continuous funding to meet your community's tree goals.



Update local codes, ordinances, plans, and standards to encourage best practices for tree planting, maintenance, and conservation.



Get residents involved! Use internship programs to supplement staff on planting projects, create tree membership societies, and explore opportunities to involve schools in stewardship activities.

A FEW RESOURCES

Beyond this module, here are a few other resources you may find useful.

Chesapeake Tree Canopy Network

<https://chesapeakektrees.net/>

Connect with resources, stories, and best practices to understand, expand, and maintain your canopy.

Chesapeake Riparian Forest Buffer Network

<https://chesapeakeforestbuffers.net/>

Learn how to build a successful forest buffer program, including funding resources.

Vibrant Cities Lab's Urban Forestry Toolkit

<https://www.vibrantcitieslab.com/toolkit/>

Explore step-by-step instructions, tools, and methods for enhancing urban tree canopy cover.

Financing Urban Tree Canopy Programs

<http://bit.ly/FinancingUTC>

Find practical strategies for funding municipal urban tree canopy (UTC) programs.

Center for Watershed Protection's Making Your Community Forest-Friendly Worksheet

<http://bit.ly/CWPWorksheet>

Use this checklist to review your local development regulations and see where you can make improvements.

Additional Resources for Local Governments



[Access here](#)

Trees and Schools: Growing the Connection A Resource Guide for Chesapeake Communities



Photo: Tree planting with students at St. Anne's School in Delaware; courtesy of Delaware Forest Service

Financing Urban Tree Canopy Programs *Guidebook for Local Governments in the Chesapeake Bay Watershed*

Prepared by
the Environmental Finance Center at the University of Maryland
and the Alliance for the Chesapeake Bay

MARCH 2019

[Access here](#)

[Access here](#)

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Total percent of county with tree cover

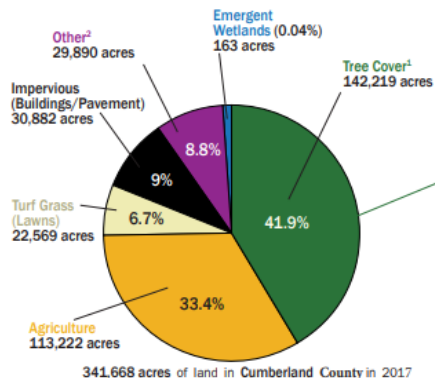
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Annual benefits provided by tree cover
(in reduced air pollution, stormwater, and carbon)

433 acres
Net loss of tree cover in 4 years
(2013 to 2017)

What is the land use/land cover breakdown in your county?

(based on 2017 high resolution imagery)

****DRAFT TEMPLATE, PRELIMINARY DATA**



1. Tree cover includes all trees occurring on all land uses, such as individual trees found over turf, impervious, agricultural, wetlands, or other lands. It also includes areas of "forest", defined in this dataset as patches of tree cover 1 acre or greater, with a minimum patch width of 240 feet.
2. Other includes a mixture of non-tree land uses not captured in the main pie chart categories. See the user guide for detailed definitions of "other" and all the land use categories.

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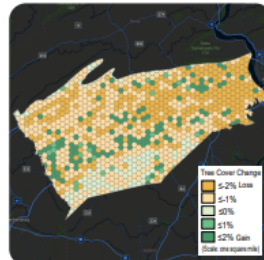
120,250 tons removed annually
\$10,594 saved annually

Calculated based on 2018 tree cover data using: landsat

Questions?

Tree Cover Status and Change for Cumberland County, PA

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Tree Cover Change from 2013 to 2017



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(State contact and website)

Next steps...

Getting the word out

- How do we get local governments using these resources?
- What other audiences/networks should we aim to reach?
- Other suggestions?

Next steps...

Tree Canopy Funding & Policy Roundtable Process

- 2022 GIT-Funded Project, focused in Fall 2022-Spring 2023
 - Invited group of state and local government leaders, watershed-wide
 - Key Issues: addressing tree canopy losses; tree equity; climate resilience
-
- What kinds of state and local decision-makers are most critical to engage in the Roundtable?
 - What issues or opportunities are most important to address?



Contact:

To learn more or engage with our Tree Canopy partnership work, please reach out!

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julie.mawhorter@usda.gov