TREE CANOPY OUTCOME – FEBRUARY 11, 2021

The narrative analysis summarizes the findings of the logic and action plan and serves as the bridge between the logic and action plan and the quarterly progress meeting presentation. Based on what you learned over the past two years from your successes and challenges, you will describe whether the partnership should make adaptations or change course.

Use your completed pre-quarterly logic and action plan to answer the questions below. After the quarterly progress meeting, your responses to these questions will guide your updates to your logic and action plan. Additional guidance can be found on ChesapeakeDecisions.

1. Examine your red/yellow/green analysis of your management actions. What lessons have you learned over the past two years of implementation?

What Worked

Summit Training & Follow Up

Our highest priority action in our workplan was successfully completed – the Chesapeake Tree Canopy Summit 2.0, held over two days in January 2020 at the Patuxent Wildlife Refuges in Linthicum, Maryland. The Alliance for the Chesapeake Bay did an excellent job hosting the Summit, with funding support from NFWF and a highly engaged planning team consisting of each State Tree Canopy lead and the US Forest Service. Around 100 people attended the Summit, representing all of the Chesapeake states and DC, with a mix of local, state, federal and NGO participants.

The Summit helped accomplish a number of actions within our workplan, offering the opportunity to provide training in a variety of new tree canopy tools and resources that we had collaborated on with partners under our four management strategies:

- FUNDING: Financing Urban Tree Canopy Programs: Guidebook for Local Governments in the Chesapeake Bay Watershed & free online UMD MOST Center Course, Funding Urban Forestry Programs (UMD Environmental Finance Center & Alliance for the Chesapeake Bay)
- POLICY: Making your Community Forest Friendly: A Worksheet for Review of Municipal Codes and Ordinances (Center for Watershed Protection); Stormwater Benefits of Trees for TMDL (Chesapeake Stormwater Network)
- TECHNICAL CAPACITY: i-Tree Landscape, Land Image Analyst (Green Infrastructure Center), Urban Tree Canopy Change Analysis (UVM Spatial Analysis Lab/USFS)
- OUTREACH: Growing Tree Canopy through Environmental Justice (American Forests, EcoLatinos, Baltimore Tree Trust)

In our last SRS review and subsequent workplan, we recognized the need to more broadly communicate the considerable public health impacts and other co-benefits of trees, expanding the messaging beyond

just water quality. Therefore, the keynote and opening sessions of the Summit focused on the latest research and partnerships around trees and public health, with very positive feedback from participants. Later in 2020, we followed this up with Chesapeake Tree Canopy Network e-newsletters focused on public health ([spring](#)), urban heat ([summer](#)), and equity and community engagement ([fall](#)), as well as a [Heat, Health & Trees](#) panel at the Chesapeake Watershed Forum, which was the second highest attended session of the conference. We recently completed an update of our Chesapeake Tree Canopy Network website, including adding new *[Why Tree Canopy](#)* sub-pages focused on Health, Climate Resilience, Equity, and Stormwater.

State Partnership Accomplishments

The first action in our Tree Canopy workplans is always focused on the ongoing, critical role of State Urban and Community Forestry programs in helping to meet our Baywide tree canopy goals. Of the many accomplishments of these programs, here are a few highlights that relate to our workplan actions:

- DC – reduced barriers and focused targeted outreach to grow more canopy on *public and* private property throughout the District, including priority areas of the MS4 and areas of extreme heat.
- Maryland and Delaware – in partnership with Alliance for the Chesapeake Bay, MD and DE launched new Tree Stewards programs in 2020, adeptly shifting to a virtual learning model due to the COVID pandemic
- New York – supported urban forest buffer plantings on municipal lands through the Trees for Tributary program; the Upper Susquehanna Coalition, a key partner in these efforts, was recognized with a national Arbor Day Foundation Headwaters Award in 2020
- Pennsylvania – launched a new lawn conversion program to help meet ambitious WIP goals to convert lawn areas to forest or meadow
- Virginia – developed an ArcGIS-based [tracking tool](#) that captures tree planting projects completed by a variety of nonprofit and local partners; completed a GIT-funded tree/buffer planting training program and guide for volunteer groups
- West Virginia—grew "Carla Hardy WV Project CommuniTree" into the Arbor Day Foundation's national "Headwaters Award" winner (2018) and WV's largest tree canopy program working with schools, subdivisions, and local governments to increase tree plantings and provide hands-on educational opportunities for management and inventories.

In addition, in the last two years, state forestry agencies have been hard at work doing a 10-year update of their State Forest Action Plans, as required by the Farm Bill. Urban and Community Forestry strategies are an important part of these plans. Collectively, the Chesapeake state forestry agencies worked with the USDA Forest Service to significantly update the [Chesapeake Forest Restoration Strategy](#) and sign a Shared Stewardship agreement in 2020. A section of this Strategy focuses on urban and community forestry strategies to advance our tree canopy goals.

Cross Outcome/CBP Collaboration

Local Leadership – We collaborated with the Local Leadership Workgroup (LLWG) on the Tree Canopy module in the new watershed education curriculum, to be finished in 2021. LLWG completed a review of our tree canopy resources to help prioritize and disseminate through trusted sources and at conferences in the future. We look forward to building on this collaboration in the next cycle and working closely on the GIT-funded workshop for land use planners.

Communications – We worked with the CBP Communications team on a Communication Plan outline, social marketing idea scoping, and a 2020 GIT funding proposal focused on effective tree planting

communication strategies and gaps/needs. Although it was not selected in the GIT funding process, we are persevering to identify other options to get this important work done.

Schools – Through the unanticipated opportunity of a US Forest Service volunteer summer intern in 2020, a [draft Trees and Schools Resource Guide](#) was developed to help strengthen the connections between environmental literacy, sustainable schools and tree canopy efforts. We are inviting stakeholder input through March 2021 and will work closely with the Education Workgroup to refine and disseminate the guide. We anticipate it being a springboard for future collaboration around training and capacity building with schools and partners.

Stormwater – To increase the dialogue between tree and stormwater professionals, we collaborated with Chesapeake Stormwater Network to offer Trees & Stormwater sessions at the 2019 Chesapeake Stormwater Retreat and at the 2020 Chesapeake Tree Canopy Summit. We helped with the planning of three CSN webcasts focused on tree BMPs: [Part 1: Reforestation](#), [Part 2: Big Trees, Small Spaces](#), and [Part 3: Finding the Right Tree BMP](#).

Challenges & Lessons Learned

The COVID pandemic has undoubtedly been the topmost factor impacting the efforts of tree canopy partners working on the ground. Agencies and nonprofits have had to adapt and limit their typical planting, volunteer engagement and community involvement methods to accommodate social distancing and keep everyone safe. The resourcefulness of these many groups to keep the work going at a feasible scale, despite the formidable challenges, is awe-inspiring. Nonetheless, COVID has impacted and will continue to impact organizations, budgets and priorities in varied and unforeseen ways.

In terms of our Workplan actions, one of our top priorities coming out of the last SRS Review was to **Build state and local capacity through new funding and policy strategies.** Maintaining tree canopy in the face of growth and development pressures and ever-expanding forest health threats (e.g. emerald ash borer, spotted lanternfly) requires local government support. Specifically, local governments need to use their powers governing development in such a way that protects their canopy. They need to have policies and sustainable programs that support tree planting and long-term maintenance. Local governments are the bedrock, and the state and federal programs, nonprofits, and volunteers all operate to help localities do this job. One thing we have learned from engagement with localities through the Summit and other channels is how weak the incentive still is, in most places, for local governments to maintain tree canopy and increase planting - especially on private lands. Finding those incentives, and continuing to improve communication with local governments about the incentives, is still urgent.

We had a lot of positive momentum and partner contribution preparing for the Tree Canopy Summit held in January 2020. Following our workplan, we still plan to follow up with a Funding & Policy Roundtable. It will engage high-level leadership and subject-matter experts in charting a set of forward-thinking strategies and recommendations to advance Bay-wide and state-level Tree Canopy efforts. This work is marked red on the workplan because COVID pandemic disruptions put planning for the Funding & Policy Roundtable on hold until partners have the resources and time to engage in this bigger-picture strategizing.

Delaying the Roundtable offers the opportunity to after we have on hand comprehensive Tree Canopy status and change report (discussed below) based on the new land cover analysis that will be completed in 2021. Understanding the extent and geographical patterns of tree canopy gains and losses will provide a strong foundation for the types of forward-thinking policy strategies and recommendations that we hope will emerge from the Roundtable.

The other actions in our workplan that are marked yellow indicate areas where we accomplished some limited work, but much more action will be needed in the next cycle in order to significantly advance towards our goals. This was mostly a function of limited staff coordination capacity to advance so many actions at once and an intention to minimize the "asks" to engage partners in new activities when partners were busy managing and responding to COVID impacts.
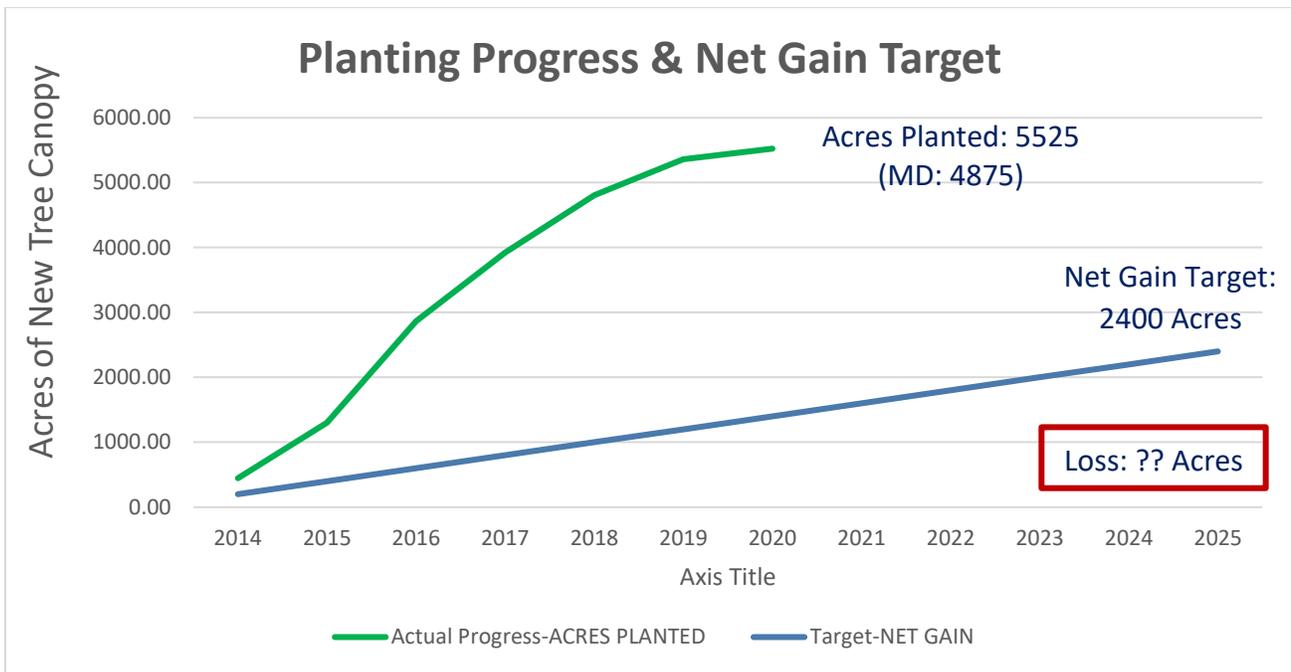
The most important new learning of the past two years centers around the urgent need to address longstanding inequities in tree canopy distribution and their environmental justice implications. At our 2020 Summit, we heard about DC's citizen science heat mapping project that revealed differences of 16.5 degrees between low canopy and high canopy neighborhoods during a heat wave. Similar differences have been found in Baltimore, Richmond and other cities nationwide, with researchers finding a direct overlap among high heat, low canopy, and low-income, communities of color subjected to past racist redlining practices. Such heat differentials can mean life or death for vulnerable individuals living in areas that are overburdened by pollution and an array of stressors. Each year in our country, more people die from extreme heat than all other weather-related hazards combined, and that number will only increase with climate change. DC's subsequent heat modeling efforts examined multiple cooling strategies and combinations, finding trees to be the big winner in mitigating urban heat. Shading vulnerable communities through adding tree canopy also benefits urban wildlife and stream health by cooling urban runoff. lWhile tree canopy and environmental justice has been a focus since 2014, this new learning calls for redoubling our efforts.

2. Regardless of how successful your short-term progress has been over the past two years, indicate whether we are making progress at a rate that is necessary to achieve the outcome you are working toward. The example graph below illustrates this concept.

The Tree Canopy Outcome goal is to expand tree canopy by 2400 acres in developed areas (rural/suburban/urban, but not agricultural land) between 2014 and 2025. This is a <u>net gain</u> goal, in which we strive to maintain existing tree canopy, mitigate losses, and expand tree canopy by an additional 2400 acres.

In 2018, the Forestry Workgroup developed methodology for the Tree Canopy Indicator, which consists of two components. First, annual progress in acres of trees planted in developed areas is tracked through state BMP submissions to NEIEN each year. The BMPs which can count towards credit are urban tree planting, urban forest planting, and urban forest buffers. These data are helpful for measuring state and local efforts towards tree canopy expansion, but they do not capture the tree canopy losses that occur every day through factors such as development and removals, storms, pests and diseases, and natural mortality. Table 1 below shows that from 2014-2020, states reported around 5525 acres of tree planting BMPs on developed lands, with the majority of those acres (4875) reported by Maryland. *(note: these data are draft and will be refined as the CBP program finalizes the official 2020 BMP progress numbers)*

The second component of the Tree Canopy Indicator consists of an analysis of the high resolution land cover data developed and updated by the Chesapeake Bay Program partnership approximately every 5 years. These data are critical for accounting for both gains and losses of tree canopy that occur on the landscape and helping us track our progress towards the net gain goal. By December 2021, we will have our first update of the 2013 (baseline) tree canopy data and change analysis, allowing us to test and our Tree Canopy Indicator for the first time and refine our methodology as needed. We look forward to being able to report out progress on the net gain goal at that time.

Planting Progress & Net Gain Target

Acres Planted: 5525
(MD: 4875)

Net Gain Target:
2400 Acres

Loss: ?? Acres

Y-axis: Acres of New Tree Canopy

X-axis (Axis Title): 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025

Legend: ——Actual Progress-ACRES PLANTED ——Target-NET GAIN

3. What scientific, fiscal and policy-related developments will influence your work over the next two years?

- *CBP Diversity, Equity, Inclusion & Justice Strategy & Tree Equity Priority*
  As discussed above, new research in 2020 highlighted the connections between the historic racist practice of redlining, inequities in tree canopy distribution, and resulting disproportionate burdens of urban heat and air quality impacts. These findings underscore the need to expand and focus the assistance available to support tree canopy efforts in underserved communities of color and low income areas. CBP's DEIJ Strategy and forthcoming Implementation Plan provide a timely framework for advancing environmental justice across outcomes, and community-based tree canopy efforts should be a key piece of this.

- *New Land Cover Data & Change Analysis*
  The new land cover data and change analysis which will be completed for CBP in 2021 will provide the first robust dataset we've had to assess gains and losses in tree canopy across the watershed. This will be vitally important in quantifying our progress and helping to inform our next set of goals and strategies for the Tree Canopy outcome.

- *COVID Impacts*
  Our tree-planting organizations have been adaptive and creative in finding ways to plant safely during this pandemic but COVID has taken a toll and will no doubt continue to do so for some time. While planning can be virtual, planting can only happen in the real world. Safe-distancing, limited gatherings, inter-state tree deliveries, and regional cross training activities have all been disrupted, delayed or cancelled. Inhibited outcomes per labor involved (i.e., fewer trees planted with greater effort) has strained state and local government budgets and will do so into the future.

- *Climate Initiatives focused on Trees* – The last couple years have brought increased global and national interest in trees as a climate mitigation strategy (Trillion Trees initiatives, etc.) In addition, there are new state initiatives emerging, for example, the MD Climate Solutions Now bill currently under consideration by the legislature, which proposes to plant 5 million trees, with 10% of those planted in underserved urban areas. Although there is still much uncertainty around these initiatives and no new funding has yet materialized, we will need to be able to respond and contribute our urban forestry expertise to the new opportunities, challenges and drivers that these kinds of initiatives may produce in the next 2 years. Many communities struggle with the resources to simply maintain the trees they have, so robust funding for maintenance to ensure that planted trees grow and thrive in the longterm will be critical.

4. Based on your response to the questions above, how will your work change over the next two years?

- *Develop and share data, tools & best practices for Tree Equity*
  We will work with CBP's new [Environmental Justice and Equity Dashboard](#) and develop a toolkit of data, tools and resources to support local tree equity initiatives. Having the data to help target efforts is important, but urban forestry practitioners are still wrestling will big questions around how to properly engage and collaborate with communities and ensure that trees planted will be sufficiently maintained. In these low canopy/highly paved areas, we need to engage different agencies and funding streams to help with removing impervious surfaces and building viable planting spaces so that the trees can survive and thrive. Although our 2020 GIT proposal for a peer learning forum on this topic was not selected for funding, we will work with stakeholders to further refine and develop training and technical assistance needs and pursue funding opportunities to deliver these. These efforts will be pursued through participation and alignment with CBP's DEIJ Strategy and Implementation Plan.

- *Assess and Communicate Tree Canopy Status & Change to Stakeholders*
  In 2021-2022, working with the new land cover and change analysis data will be a major focus, in order to test and refine our Tree Canopy Indicator and distill the most useful findings to inform future goals, policy and strategies. In collaboration with relevant CBP efforts (Land Use/Healthy Watersheds, Local Leadership), we will develop a Bay-wide summary report on Tree Canopy status and change that will serve as a springboard for convening the Funding & Policy Roundtable mentioned above. In addition, through a supplemental US Forest Service grant to the Chesapeake Conservancy, and with input from the Forestry Workgroup, we will be developing digital communication products to share the latest tree canopy/land cover data and change analysis at the local scale (e.g. county fact sheets, municipal where feasible). These efforts will be closely coordinated with the Local Leadership Workgroup, so that we can also take advantage of opportunities to engage and educate newly elected local officials in 2022 and beyond.

- *Enhance virtual learning and other accessible training and technical assistance; plan for a post-COVID biennial Tree Canopy Summit in 2022*
  While we are still in "virtual mode" due to COVID, we will look for opportunities to offer additional webinar trainings and engagement opportunities in 2021 and beyond. At the 2020 Tree Canopy Summit, we heard significant interest in continuing these periodic regional gatherings on a regular (e.g. biennial) basis, so we will scope out opportunities to host the next one in 2022, including virtual options for those who cannot travel to or attend long face-to-face meetings. In addition, we need to plan for gatherings where we can cross-pollinate with other

partnership efforts like local government, schools, communications, etc. so that we can build tree canopy more into those efforts.

- *Continue building our partnership work around priority issues and needs*

  As noted, our biggest gaps continue to be around funding and policy needed to maintain and increase canopy, particularly at the local government scale. Therefore, a top priority action will be preparing for and convening the Funding & Policy Roundtable, involving high level agency leadership and subject matter experts who can help us develop a set of robust funding and policy strategies and recommendations for the future.

  In addition, we will continue to advance cross-program collaboration around local leadership/engagement, communications, DEIJ, stormwater and school-based opportunities.

5. What, if any, actions can the Management Board take to help ensure success in achieving your outcome?

- *Prioritize CBP DEIJ Implementation Plan efforts to grow investments in communities, with tree equity as a focus*

  The CBP partnership's new DEIJ Strategy and forthcoming Implementation Plan represent an urgent imperative to focus and expand watershed restoration investments in communities facing environmental justice challenges. Investments in tree canopy should be a key strategy in these efforts, given the overlapping benefits for water quality, air quality, heat reduction, overall public health, energy savings and community development.

- *Continue and grow the support for critical state urban and community forestry programs, through leveraging other available programs and policies*

  State urban and community forestry programs provide vital assistance to community efforts, but additional funding streams, partnerships and policy tools are needed to counteract all the canopy losses occurring on the landscape.

➢ **Request***: in each state, MB member(s) work with State Tree Canopy Lead to document existing programs/policies that could help* **both maintain and expand** *tree canopy (e.g. water quality, climate, health, community development, workforce, environmental education, etc.). This inventory of existing opportunities will support ongoing collaboration in-state and also be used in the design and discussion materials of the Funding & Policy Roundtable. Forestry Workgroup will provide more detailed guidance on this.*

- *Participate in the Funding & Policy Roundtable and next Summit*

  Once we have the updated Tree Canopy data/change analysis and Summary Report on gains and losses, we will be convening the Funding & Policy Roundtable with a combination of state leadership representation, topic experts, and other key stakeholders. At that stage, we will need Management Board support at that stage to identify the right participants and to contribute to and take action on the strategies and recommendations that are developed.

Management Board participation in the 2020 Summit was very valuable and appreciated by our tree canopy partners – we will reach out again for your active engagement in the next biennial Summit in 2022.