Aligning Delaware's Tree and Climate Priorities

2025 Delaware Tree and Climate Workshop Summary Report

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Prepared by the University of Maryland Environmental Finance Center
for the DNREC Division of Climate, Coastal and Energy

UNIVERSITY OF MARYLAND 1856 ENVIRONMENTAL FINANCE CENTER

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1. Overview

Delaware is home to coastal and inland forests, working timberland, forested tidal wetlands and freshwater marshes, as well as a network of urban trees found in cities and towns across the state. These ecosystems provide critical wildlife habitat, support economic sectors including forestry and tourism, and make communities healthier, safer and more prosperous.

Delaware's trees and forests are also essential in supporting the state's ambitious climate action goals set forth in the Delaware Climate Action Plan. Trees sequester carbon, mitigate excess heat in urban areas through shade and evapotranspiration, and help reduce damage caused by runoff flooding. Maintaining healthy and viable trees and forests is critical to Delaware's ability to mitigate and adapt to future climate impacts.

Yet these resources are increasingly under pressure from various threats, including climate impacts, invasive pests, and land development. Modeling by The Nature Conservancy (TNC) shows that 46% of Delaware's protected lands are projected to be impacted by sea level rise by 2050,[1] and the Delaware Forest Service (DFS) has identified increased temperatures and invasive pests as key threats to forest health.[2] Residential and commercial development has contributed to significant decreases in forests and natural and working lands. According to DFS, the state has lost approximately 30,000 acres of forestland since 1986, with the majority of this loss occurring in Sussex County due to population growth and development.[3] Population growth is expected to continue. The Delaware Population Consortium, which annually prepares population projections for the state, projects a 12% population increase statewide by 2050 compared to 2020 levels, with Sussex County's population anticipated to increase nearly 60% during that time frame.[4][5]

The encouraging news is that there is current momentum in Delaware to protect existing forests and expand tree canopy statewide, with many partners working toward these goals. Some of these initiatives are led by state agencies - such as the Delaware Department of Natural Resources and Environmental Control (DNREC)'s Tree for Every Delawarean Initiative and the DFS Delaware Tree Stewards Program – and others are spearheaded by conservation-focused nonprofit organizations, universities, schools, businesses, and individuals, such as the Rethinking Delaware coalition and TNC's Delaware Conservation Blueprint. These initiatives support Delaware's tree and forest protection goals set forth in various plans and reports, including the Delaware Statewide Forest Strategy, the Delaware Riparian Forest Buffer Action Strategy, the Delaware Wildlife Action Plan and the Delaware Climate Action Plan.

[1] The Nature Conservancy. 2025. Delaware Conservation Blueprint.
[2] Delaware Forest Service. 2020. Delaware Statewide Forest Strategy.
[3] Ibid.
[4] Delaware Population Consortium. October 2024. Annual Population Projections Data Tables.
[5] Delaware Population Consortium. October 2024. Population Projections Places (all municipalities).

Given the wide range of goals, plans, and partners involved in these and related efforts, the DNREC Division of Climate, Coastal and Energy (DNREC CCE) recognized the need for enhanced alignment and priority-setting around forest and tree efforts in Delaware. To meet this need, the Division hosted the **Delaware Tree and Climate Workshop** on April 3, 2025, convening a cross-section of partners to coalesce around high-priority strategies to guide collective actions moving forward. This effort will help inform the 2025 update of the Delaware Forest Strategy as well as the 2025 update of the Delaware Climate Action Plan.

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Overall direction and guidance for this project was provided by the Delaware Working Lands Workgroup, comprised of the following individuals:

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2. Workshop summary

The Delaware Tree and Climate Workshop convened partners from across the state on April 3, 2025 at the Modern Maturity Center in Dover, Delaware. Stakeholders from multiple sectors gathered for this one-day event to identify and align priorities relating to forestry, urban trees, natural and working lands, and climate resilience. Appendix C includes the event agenda, presentation slides, and other event material.

Participants

Workshop organizers designed the event to encourage alignment and collaboration among a wide range of stakeholders working to advance forestry, urban trees, natural and working lands, and climate initiatives throughout Delaware. DNREC staff identified invitees in collaboration with UMD EFC and the Natural and Working Land Work Group. A total of 73 individuals registered for the event and 63 attended in person on April 3. Attendees represented state agencies, county and municipal governments, conservation districts, federal agencies, nonprofit organizations, and universities.

Keynote presentation

Jad Daley, President & CEO of American Forests, opened the workshop with a keynote presentation focused on advancing tree equity for health equity and climate action. This presentation highlighted the critical role that urban forests play in addressing extreme heat and the way in which trees in cities and towns present an affordable, equitable, and functional solution to the pressing challenges communities face. This presentation shared resources that are readily available to help communities assess trees' climate and health benefits. The presentation stressed the importance of building coalitions around tree action, developing needed career pathways and skills, and most importantly, continuing to tell the story and build momentum around this issue of national importance.

Panel discussion

Following the opening session, a panel presented on Delaware forestry and climate goals and trends, to set the stage for the work sessions to follow. The panelists included:

- Brandy Espinola (Program Director - Climate and Sustainability, University of Maryland Environmental Finance Center) who oriented participants to the goals of the day and provided background on the 2023 Chesapeake Bay Tree Canopy Policy and Funding Roundtable which planted the original seeds for this workshop.
- David Edgell (Director, Delaware Office of State Planning Coordination) who shared information on recent land use and forest cover trends and statewide planning issues, underscoring the need for collaborative, proactive planning in order to meet Delaware's housing needs while also protecting natural resources and ensuring public services can be provided in a cost efficient, sustainable way.

- Susan Love (Administrator, Climate and Sustainability Section, DNREC Division of Climate, Coastal and Energy) who provided an update on the 2025 Climate Action Plan process and highlighted how forests and urban trees are a vital part of Delaware's climate solution.

Goal Pathway breakout discussions

The workshop featured two facilitated small-group work sessions, during which participants engaged in collaborative discussions and activities to prioritize tree/forestry strategies and actions. Participants were divided into seven work groups, each of which was assigned to one of three **Tree and Forestry Goal Pathways** (identified below) distilled from a crosswalk of existing Delaware plans and reports (see Appendix A for crosswalk findings).

Community Greening

Enhancing tree canopy and greenspaces in urban and suburban areas, to maximize carbon sequestration and storage, improve public health and quality of life, mitigate heat island effects, protect water quality, and achieve other social, economic and environmental benefits.

Forest Preservation and Conservation

Protecting and managing forests to improve wildlife habitat, water quality, carbon sequestration and storage, and resilience.

Forests as a Commodity

Improving forest health, productivity, and benefits, to promote vibrant, sustainable forest product markets, keep forest land forested, and maximize carbon sequestration and storage.

Prior to the workshop, participants identified preferred work group assignments via a survey. Event organizers placed participants into their preferred breakout session based on survey results. The following breakout groups resulted: three groups discussed Community Greening; three groups discussed Forest Preservation and Conservation; and one group discussed Forests as a Commodity.

In each work group, a trained facilitator moderated the discussion, and an assigned notetaker captured transcripts. Additional participant input was captured through facilitators' flip chart notes and individual participant worksheets. Appendix C presents this information.

Work session 1: prioritizing strategies

During the first work session, participants engaged in a **prioritization exercise** to identify the top three most important strategies for Delaware to pursue. Facilitators provided participants with

sample strategy lists distilled from the plan crosswalk (see Appendix A) and asked them to validate the strategies provided and/or identify additional strategies that should be considered.

Participants then engaged in group discussions and a dot-voting exercise to determine which of these strategies should be prioritized for consideration in Delaware's 2025 Climate Action Plan and other related efforts. In prioritizing strategies, moderators asked participants to consider:

- **Impact:** Which strategies will drive the most meaningful change for Delaware's forests, urban trees, natural and working lands, and climate resilience?
- **Enabling future action:** Which strategies are essential first steps to unlock other opportunities—whether through funding, policy change, or capacity-building?
- **Urgency:** Are there time-sensitive opportunities we need to act on now?
- **Co-benefits:** Which strategies provide multiple benefits to people, places, and planet?

Section 3 of this document summarizes findings from this exercise.

Afternoon presentation

Following the morning session, participants broke for a networking lunch. The afternoon opened with a presentation by Marcia Fox, Executive Director of Delaware Wild Lands. This session highlighted collaborative wins for trees, forests and climate with a focus on recent and planned land preservation and rehabilitation projects.

Work session 2: implementation planning

The second work session focused on identifying **implementation steps** for each priority strategy selected during the morning session. Participants identified key actions, partners, resources, obstacles, opportunities and next steps necessary to implement strategies. To help frame this discussion, work group facilitators asked participants to think about the following guiding questions:

- **Leadership and authority:** Who has decision-making power?
- **Preconditions for action:** What needs to happen first (e.g., legal/policy changes, stakeholder alignment)?
- **Specific steps:** What are the specific tasks to implement the strategy?
- **Resources:** What funding, data, or expertise exist and are needed?
- **Timeline:** What's the timeframe for implementation milestones?
- **Collective action opportunities:** How can collaboration accelerate progress?

Section 3 of this document summarizes findings from this exercise.

3. Summary of responses

This section presents priority strategies and actions identified during the Delaware Tree and Climate Workshop:

- Part A highlights common themes that emerged across Goal Pathway work group discussions and throughout workshop presentations
- Part B lists the top three strategies that workshop participants identified within each Goal Pathway, through prioritization discussions and exercises during the workshop
- Part C shares the implementation steps that workshop participants developed for each priority strategy

These themes, strategies and actions are not obligations or binding agreements, but rather represent a suite of priorities that participants lifted up as having strong potential to move Delaware toward its tree and climate resilience goals. Participants identified these as the highest-impact actions that should guide individual and collective planning by Delaware's tree and climate partners.

A. Cross-pathway themes

Below are key themes that were emphasized by workshop participants and speakers during the event, emerging across multiple Goal Pathway discussion groups and sessions. Distinct from the priority strategies that participants identified during prioritization exercises (presented in Section 3.B. Priority strategies, below), these are the recurring messages that the UMD EFC project team observed while distilling workshop proceedings and participant input.

Statewide forest protections and proactive land use planning are needed to preserve Delaware's high-value forests and natural and working lands.

While land use protection and statewide forest regulation were not intended to be a focus of this event, these issues were raised repeatedly. Workshop participants clearly stated the need for a clear and consistent statewide regulatory framework to preserve Delaware's forests. Current state efforts around wetlands protections legislation were seen as a step in the right direction.

Relatedly, current growth patterns are causing significant loss of high-value natural lands as well as imposing pressure and undue costs on public services. This trend is especially pronounced in Sussex County, which in 2023 accounted for 61% of all residential home building permits granted in the state. Forty percent of the development that occurred in Sussex County between 2007 and 2022 was on lands designated by Delaware's Office of State Planning and Coordination as "Level 4" in the Delaware State Strategies for Policy and Spending. Although not regulatory in nature, Level 4 areas are primarily farmland and open space that is considered unsustainable for growth. Smarter, sustainable development will preserve natural resources and quality of life for existing and new residents.

Recommendation: Continue building the network of partners to engage in outreach and advocacy around statewide forest preservation. Look to neighboring states and counties for sample zoning and ordinances; prioritize infill development and redevelopment in established towns.

Trees are a cost-effective part of Delaware's climate solution.

Delaware's forests and urban trees are an essential part of Delaware's ability to respond to a changing climate. They will become increasingly important as Delaware takes ambitious steps to mitigate carbon emissions and improve its climate resilience.

Recommendation: Continue making the link between trees and resilience, to gain support from practitioners, practitioners, advocates, policymakers, and leaders. Consider using

resources such as those compiled by GSI Impact Hub to highlight the multiple benefits that green spaces provide.

Tree maintenance must be better integrated and incentivized.

Both established and newly-planted trees need maintenance to deliver benefits. Tree care should be integrated and incentivized.

Recommendation: Gain clarity around who is accountable for evaluating, maintaining, and replacing trees in developments and in unincorporated areas. Include maintenance set-asides in all grant programs.

Available resources do not always make it into the hands of implementers.

Within the state, many resources exist to support sound forestry and urban tree planning and management. This includes tree canopy and forest cover data, model land use codes, outreach and marketing materials, training and support opportunities and more. Yet these resources could be more widely utilized by implementers, including local government staff, public works crews, tree care professionals and landowners.

Recommendation: Maximize the reach and impact of existing training resources offered by state agencies and other partners, by emphasizing the value of training, especially for municipal and county public works crews. Make training resources available in easily accessible formats.

A more holistic approach to trees will yield efficiencies.

Trees are part of a large and interconnected system spanning land use, infrastructure, climate resilience, public health and economic development. Recognizing this interconnectedness through comprehensive, cross-sector planning, funding and management – will better ensure that investments in trees and natural lands yield long-term, integrated benefits with fewer inefficiencies.

Recommendation: Encourage agencies and partners to integrate tree-related goals into broader planning and decision-making frameworks, such as comprehensive plans, climate action strategies, and capital improvement plans. Consider forming cross-sector working

groups that include transportation, housing, public health, economic development, and natural resource representatives to align goals and coordinate action.

Funding and staffing are foundational.

In virtually every strategy and action step identified during the workshop, funding and staffing were mentioned as essential prerequisites for making progress. At the state agency level, current staff capacity is already constrained, and many of the recommended implementation steps will require additional staff time and resources.

Recommendation: To augment local and regional staff capacity, evaluate shared / regional forester and arborist positions to work in communities and rural areas; consider a Community Watershed Forester circuit-rider or university extension model. Continue to make the case for dedicated and adequate funding for tree programs, including for staff to implement them.

Workforce development is a growth area.

Skilled workers are needed to maintain and preserve Delaware's forests and urban trees. There is substantial opportunity both to train the existing workforce and to build career pathways for future workers in Delaware's green economy.

Recommendation: Assess labor market demand and needs; gauge interest in adding courses at Delaware universities and technical colleges. Make connections between available training / resources and the people who work with forests and trees; consider a Community Watershed Forester model and/or university extension model.

Everyone plays a role in building the movement.

Despite the vast array of benefits that Delaware's forests, trees and natural and working lands provide, not every Delawarean yet appreciates the role that trees play as critical infrastructure.

Recommendation: Continue telling the story about the value of forests, urban trees, and working lands. Focus on eep the message clear and simple; focus on economic and health benefits. For policy-makers, emphasize that investing in nature-based solutions saves money and provides multiple co-benefits.

Delaware's tree and climate community wants to keep collaborating.

There is a robust network of partners working to enhance Delaware's forests and natural and working lands. Workshop discussions made clear that there is a high level of energy and enthusiasm for continued, ongoing collaboration. This is especially desired across sectors – e.g. state agencies talking to nonprofits; advocacy groups talking to town staff.

Recommendation: Pursue avenues for ongoing convening and collaboration. Include nontraditional partners in these conversations.

Partners agree on priorities.

Both within work groups and across groups discussing the same topic, there was broad consensus on which strategies should be prioritized moving forward. This indicates a clear vision for future action.

Recommendation: Amplify the goals and strategies highlighted during the workshop; continue to speak with one voice about the need and benefit of protecting Delaware's forests, natural and working lands, and urban greenspaces.

B. Priority strategies

This section presents priority strategies that workshop participants identified within each Goal Pathway, through the prioritization process described in Section 2. More detail for each strategy, including potential action steps and key partners, is presented in Section 3.C. Implementation plans. As previously emphasized, these do not represent binding agreements but rather the strategies that workshop participants identified as having strong potential to move Delaware toward its tree and climate resilience goals.

Community greening

Greening strategy 1: Protect existing urban tree canopy, forest buffers, and greenspaces

There is a critical need to strengthen local policies and ordinances so that they protect existing trees, require appropriate plantings in new developments, ensure long-term maintenance and impose penalties for removals. More consistent statewide regulatory frameworks are also a priority. Sufficient staffing to enact and enforce regulations is needed in towns but especially in unincorporated areas. The Delaware Office of State Planning Coordination (OSPC) and the Delaware Resilient and Sustainable Communities League (RASCL) were identified as potential lead partners in implementing this strategy.

Greening Strategy 2: Increase the volume and quality of urban tree and buffer plantings

Tree plantings should continue to be emphasized, especially in strategically identified locations. Ensuring accountability for ongoing maintenance is important, as is planting the right tree in the right place. As with Greening Strategy 1, key players include state, county, and municipal governments and agencies, along with nonprofits with tree planting programs. RASCL was again identified as a potential convener.

Greening strategy 3: Augment education, outreach, and technical assistance for urban greenspaces

Many excellent training resources and trainers are available within the state. There is strong interest in maximizing the reach and impact of these trainings, especially targeting priority audiences including tree care professionals, state and local implementers and citizens.

Recommendations include coordinating among trainers and assembling a series of trainings in a variety of formats (slides, videos, talk points) to reach a range of audiences. RASCL was identified as a potential convener, with this strategy lending itself to integration with the previous two.

Forest preservation and conservation

Preservation Strategy 1: Protect forests through legislation, regulation, and incentives

Using regulatory and planning tools to protect forests was identified as a major priority for Delaware. Action at both the state and local level is needed. Participants emphasized the need for policies that are consistent across the state, as well as the importance of bringing together a wide range of partners in order to build support for regulatory changes. Delaware can look to sample regulations and policies within and outside the state. The Delaware Office of State Planning Coordination is identified as playing a leading role, along with county and municipal government. The full network of tree/climate partners will be needed to advocate for statewide regulatory action.

Preservation Strategy 2: Maintain and restore forests for water quality, wildlife, and climate resilience

Participants noted that many forest monitoring and management activities are already underway in Delaware. Opportunities include better alignment across state agencies to maximize the effectiveness of forest stewardship activities; using state grant funds as an incentive for landowners to report on forest health metrics and invest in maintenance; and investing in workforce training and/or certification to ensure that Delaware has ample capacity to conduct high-quality forest management.

Preservation Strategy 3: Increase education, outreach and technical assistance to landowners and state/local leaders

Education is a high priority and should be ongoing, reaching a variety of audiences, especially policymakers, elected officials, state and local staff, students, homeowners and HOAs. Existing training opportunities, funding programs, and other resources should be strategically marketed to promote their utilization.

Forests as a commodity

Commodities Strategy 1: Improve forest inventories and data/metrics tracking and reporting

Regarding forest inventories and data tracking and reporting, participants identified three priorities: using remote sensing technology to improve data quality, determining appropriate metrics for measuring and tracking forestry's GHG benefits, and improving access to data.

Commodities Strategy 2: Promote the importance of Delaware forests and forest industries

There is already good work underway to promote Delaware's forest product markets. However, Delaware needs workforce development and job creation to fill workforce gaps. Growing the native nursery stock industry is also a priority.

Commodities Strategy 3: Maintain and improve forest health and resilience

Participants underscored the importance of tree maintenance, not just planting. Sustainable forest management on both public and private lands is needed in order to ensure Delaware's forests remain resilient and productive; existing processes for doing this are in place. Monitoring, research and funding to address forest resilience threats (climate, pests) were identified as high priorities, as was proactively preparing for disasters. DFS and TNC were identified as potential key partners.

C. Implementation plans

This section presents the implementation plans that workshop participants developed for each priority strategy. These plans include specific actions that should be prioritized in implementing the respective strategy, along with partners that are well-positioned to support implementation, existing resources that can be leveraged to ensure success, critical first steps, obstacles to implementation, and proposed solutions for overcoming those obstacles. The Delaware Natural and Working Lands Work Group reviewed each implementation plan and in some cases provided comments, which are included below.

It is important to note that these plans do not represent binding commitments or obligations but rather can be seen as a menu of actions that workshop participants identified as high-impact steps to be pursued by a range of players in order to advance Delaware's tree, forestry and climate goals.

Community greening

Greening strategy 1: Protect existing urban tree canopy, forest buffers, and greenspaces

Greening 1.1. Assemble and share local code ordinance models and examples (for street trees, development, etc) to protect trees and greenspace, with an emphasis on policies that protect large/heritage trees and established canopy. Include maintenance and invasives management provisions. Provide for penalties and enforcement.

Key partners	- RASCL; Office of State Planning; DNREC CCE - DFS / urban tree practitioners / APA-DE: help with review & assembly
Resources to leverage	- Existing municipal / county ordinances and standards - esp Newark and New Castle County - Chesapeake Bay Program: collections of existing resources and examples (e.g. model codes from Green Infrastructure Center)
Steps	- DNREC CCE contact OSPC and RASCL: ask what they would need to take the lead on compiling ordinances and share in easily accessible place - Convene local governments to discuss existing codes and ordinances, gaps, and new proposals, as well as to problem solve

	around needs and opportunities
Obstacles and solutions	Sufficient urban foresters and arborists, especially to support code development and enforcement in unincorporated areas. Solution: Consider regional or shared foresters.
Notes/update from NWL Work Group	- Staffing is currently an issue - Potential to leverage comprehensive plans
Greening 1.2. Amend street tree / development codes to protect trees and greenspace, with an emphasis on policies that protect large or heritage trees and established canopy. Include maintenance and invasives management provisions. Provide for penalties and enforcement.	
Key partners	- Local governments: implementation - OSPC/RASCL/DFS: support - Community members, civic groups (e.g. Master Naturalists, Master Gardeners), nonprofits: ground-up support - Delaware Invasive Species Council
Resources to leverage	- All the partners working to support this, including conservation NGOs, universities, USFS - Existing plans and data: First Map, Riparian Forest Buffer Program Action Strategy, DFS Urban Forestry
Steps	- Research what local codes are in place (and are effective) - Pilot an ordinance project with an interested city; share results
Obstacles and solutions	- Ensuring ordinances are robust and practical. Solution: Get input from practitioners in developing ordinances - Public will / local leader approval for new regulations. Solution: Conduct outreach especially around economic benefits; host well-publicized problem-solving sessions; share pilot examples showing success
Notes/update from NWL Work Group	- CCE developed a white paper in 2022 about forest protection and tree protection codes in the mid-Atlantic. This needs to be updated. - RASCL could possibly develop model ordinance - Currently there is no state regulation on “heritage trees.” See: https://delawaretrees.com/bigtrees/
Greening 1.3. Establish statewide minimum standards for protecting urban trees, greenspace, wetlands, and riparian	

forest buffers.	
Key partners:	Legislature; advocates
Resources to leverage	Same as 1.2
Steps	Convene meeting between non-state agency partners and a supportive elected official to better understand what data/support/draft language would be needed to advance statewide standards
Obstacles and solutions	Public will for new regulations. Solution: Conduct outreach especially around economic benefits; host well-publicized problem-solving sessions; share pilot examples showing success
Notes/update from NWL Work Group	None.

Greening Strategy 2: Increase the volume and quality of urban tree and buffer plantings

Greening 2.1. Amend local ordinances to incentivize/require planting and maintaining trees (right species, right place).	
Key partners	- Counties, municipalities: ordinance updates and enforcement - Residents, developers, agencies: implementing planting and maintenance (need to be incentivized)
Resources to leverage	- Existing datasets (FirstMap/CAST/DTAP/LULC/heat index info/TNC conservation priority map) to ID planting locations - Stormwater fee revenue for maintenance - Buffer incentive program
Steps	- Ordinance review and training - coordinate with Strategy 1 - Identify priority planting areas based on data, with input from community members / landowners - Public Works Departments take ownership of public trees, in counties and unincorporated areas

Obstacles and solutions	Community buy-in to expand opportunities for more plantings. Solution: education and outreach
Notes/update from NWL Work Group	DFS urban coordinator role will be to work with municipalities/counties on ordinances for tree planting and maintenance.
Greening 2.2. Provide planting and maintenance training for citizen foresters, private landscapers, and public staff. Consider apps, YouTube videos, clinics, and other creative delivery methods.	
Key partners	DFS, CBLP, CBPO
Resources to leverage	Existing training and outreach material - DFS, CBLP, CBPO DFS's Tree Stewards Program (model / example) DFS annual arborist seminar
Steps	Train staff and others
Obstacles and solutions	Challenge: getting private landscapers and public staff to take trainings. Possible solution: Training requirement for licensure, or required workforce training for these groups
Notes/update from NWL Work Group	Future DFS tree care seminars will incorporate more urban related information for private landscapers and the public
Greening 2.3. Extend cost-share programs for urban tree buffers (with match waivers as needed).	
Key partners:	State agencies - DNREC, DelDOT, DFS
Resources to leverage:	Watershed Stewardship's -Buffer Incentive Program & Delaware Riparian Forest Buffer Action Strategy (to be consulted as models)
Steps:	None identified
Obstacles and solutions:	Challenges related to land ownership

Notes/update from NWL Work Group	DNREC Watershed Stewardship's Riparian pilot in the Chesapeake Bay
Greening 2.4. Increase funding for planting, technical assistance and maintenance. Include invasives removal; change funding programs to be upfront rather than reimbursement- based and multi-year versus one-time.	
Key partners	Legislature, advocates
Resources to leverage	DFS Urban Program has invasive species removal grant as part of annual grant program; currently using federal funds
Steps	Lobby for state funding
Obstacles and solutions	None identified
Notes/update from NWL Work Group	- Federal funding cuts might limit the state's ability to fund additional programs like this. State funds might need to be allocated elsewhere. - Multi-year funding would be a big deal
Greening 2.5. Establish statewide minimum standards for planting and maintaining trees/buffers.	
Key partners	- Legislature - CBLP - DFS (currently working on standards guidance)
Resources to leverage	DFS' current work to create standards for planting and maintaining trees for urban grant program
Steps	Advocate for state legislation (minimum standards) and funding
Obstacles and solutions	None identified

Notes/update from NWL Work Group	None

Greening Strategy 3: Increase education, outreach, and technical assistance for urban greenspaces

Greening 3.1. Create a series of trainings / presentation toolkit for multiple users, delivered in multiple venues on high-priority topics, including need / benefit of planting and protecting trees.	
Key partners	- RASCL and DFS: potential conveners / coordinators - Organizations and professional networks that already do training (sometimes offering continuing education credits) and have established audiences: Delaware Nursery and Landscape Association, Chesapeake Bay Landscape Professionals, UD Cooperative Extension, DFS, arborist groups, conservation districts: trainers - Urban forestry professionals, local staff and public officials, community volunteers, nonprofits, trainees - State staff who do tree maintenance / planting implementing already - i.e. OMB facilities, DelDOT, state parks, Watershed Stewardship: trainees
Resources to leverage	- Chesapeake Bay Program Local Government Guide to the Chesapeake Bay Module 4: Capitalizing on the Benefits of Trees - Chesapeake Bay Landscaping Professionals resources - Master Naturalists, Master Gardeners - Arborist resources (ISA, AmForests) - and arborists for speakers - DNREC handbooks, recordings - Program websites and strategic plans - DFS training materials, other forestry training materials (for IRA grant, UCF approves curriculum) - Tree canopy data, existing ordinances, existing management plans, funding info - State forestry staff and urban forestry professionals
Steps	Convene special group at RASCL (leverage this group's local assistance model; combine with Strategy 1 and possibly 2) charged with:

	- Convening the coalition of training partners and identify priority training needs and topics - Assembling a series of resources such as pre-recorded presentations, slides, and talking points to be hosted in a central location - Developing plan for training events: speakers, locations, agenda, audiences, sponsors, etc - Networking / conducting outreach to priority groups (state programs (NPS/CBIG) to help coordinate and target audiences) - Accessing funding / sponsors for trainings Coalition of training partners: Offer multiple trainings with multiple tiers (use certification / rewards as incentives): - State staff - old and new - Community members (go where they already are; invite them to existing events / sessions / etc; consider field trips a la APA) - Train the trainer - tech experts
Obstacles and solutions	Limited availability of staff to conduct trainings. Solution: Leverage network of professional groups and other trainers Ensuring sound planting, protection and maintenance goals. Solution: Gather updated data and long-term forest / land trends to be used in trainings.
Notes/update from NWL Work Group	DFS has arborist trainings and will get Tree Stewards program back once more staff is hired. Urban will be working on getting training videos online for the public to access. Important; start with basics of planting (depth, time of year, unique protection measures such as fencing, pros and cons on planting in rows for maintenance, watering requirement per time of year)
Greening 3.2. Promote associates / trades degrees in specialized areas like forestry and urban restoration, to grow the pipeline of professionals entering forestry.	
Key partners	Universities and technical colleges
Resources to leverage	- UD has an urban class but not a full pathway - DelTech ag program has some related courses - DFS Urban Program currently has federal funding for universities to receive funds to have an urban/forestry curriculum;

	no interest yet expressed by DE colleges - Technical high schools also have some relevant courses (pathways program)
Steps	- Conduct a labor market scan to determine need / openings in forestry-related fields - Approach potential partner institutions to understand interest and options for new degrees (e.g. adding content to existing pathway programs at UD) - Approach elementary schools and technical high schools and colleges (see previous step) - Career fairs at elementary, middle, and/or high schools; start with teachers to explore opportunities
Obstacles and solutions	- Limited capacity among teachers to add content. Solution: Connect programming to existing science standards - Overall decline in the student population causing college campuses across the country to close down programs
Notes/update from NWL Work Group	Will need to see specific market info for this, as well as funding to jump start the programs.

Additional Feedback

In addition to the priority strategies described above, participants in this Goal Pathway emphasized a need to improve statewide data and tracking for urban forestry. Particular needs are identifying standardized, holistic tools that can be coordinated across users, as well as creating accessible training on the use of these and other tools (e.g. i-Tree, Tree Equity Score, Field Collector).

Forest preservation and conservation

Preservation Strategy 1: Protect forests through legislation, regulation, and incentives

Preservation 1.1. Adopt statewide forest preservation policy.	
Key partners	- State legislature - Cabinet Committee on State Planning - Office of State Planning: convene partners - Group to draft legislation: DFS, DNREC, TNC
Resources to leverage	- MD/other state regs, including for forested wetlands and keeping forests as working forests - Senator Stephanie Hansen's team - already working on this - New Castle County's codes - Forest Action Plan, Statewide Forest Strategy
Steps	- Convene partners and those opposed (early on) - Find a legislative sponsor - Review policies in other states - Cabinet Committee: assemble data, messaging (tie to basic human needs)
Obstacles and solutions	- Potential for developers to pursue farmland if only forest is preserved. Solution: Comprehensive natural and working lands preservation legislation - Multitude of plans. Solution: Consistent legislation
Notes/update from NWL Work Group	None
Preservation 1.2. Integrate forest, tree and buffer goals into land use codes and ordinances.	
Key partners	- OSPC and Counties' Planning and Zoning - lead - RASCL - help convene/study - Municipalities

	- Gen Assembly, OSPC, DDA - Rethinking Delaware coalition
Resources to leverage	- Land use / land cover data - TNC Conservation Blueprint - DLPC - Other states' regulations for good models - New Castle County's codes - State plans and strategies
Steps	- First step – lit review: what mechanisms currently exist within the state of DE that are being underutilized; trickle down to model ordinances - Get counties to adopt areas to not develop and prioritize other areas to develop - Workshop to bring people together
Obstacles and solutions	- Opposition to increased density. Solution: Education and engagement - Multitude of plans. Solution: Consistent legislation - Nature / structure of land use planning; comprehensive planning already a heavy lift for local governments. Solution: Technical support from OSPC
Notes/update from NWL Work Group	None
Preservation 1.3. Look at incentives for smarter development and forest preservation.	
Key partners	- OSPC - Municipalities, counties - League of Local Governments - DE Homebuilders Association - City Managers Association of DE - General Assembly
Resources to leverage	MD regulations and codes

Steps	Meet with DE Homebuilders Association – they have some ideas to incentivize preservation
Obstacles and solutions	- Opposition from home builders and/or private landowners. Solution: Garner their input and support early on - Opposition to increased density. Solution: Education and engagement
Notes/update from NWL Work Group	OSPC is putting a lot of thought into this. It's difficult with no enforcement authority or leverage.

Preservation Strategy 2: Maintain and restore forests for water quality, wildlife, and climate resilience

Preservation 2.1. Ensure state funded forestry projects are monitored and adequately maintained for forest health and productivity, including climate benefits.

Key partners	- DFS, DNREC: lead - State rep - Property owners, state parks: monitor and maintain - Open Space
Resources to leverage	- NRCS CREP status reviews - TEDI program
Steps	- Increase coordination and collaboration across state agencies / pool funding sources to remove silos and maximize forest monitoring and stewardship activity - For grant-funded projects: (1) develop maintenance agreement as a requirement for funding (incentive!), (2) develop guidance and training on managing forests, (3) require reporting on key metrics
Obstacles and solutions	Dedicated staffing and funding. Solution: All the network-building and education actions mentioned here
Notes/update from NWL Work Group	- DFS inventories and inspects every tree planted/pruning/removal project through DFS' grant program and volunteer projects.

Preservation 2.2. Implement training and certification for tree care professionals and landscapers.	
Key partners	- DFS: lead - Conservation districts, nonprofits, other partners: support
Resources to leverage	Climate Action Plan
Steps	- Invest in workforce education and training to build capacity for high-quality forest management in DE - Evaluate benefit of requiring certification for tree care professionals
Obstacles and solutions	- Dedicated staffing and funding. Solution: All the network-building and education actions mentioned here - Arborist certification is a three-year process and may present a barrier to entry. Solution: Consider lower-threshold certification training and workforce training programs
Notes/update from NWL Work Group	DFS is working on workshops for CEUs as well as arborist certification
Preservation 2.3. Monitor and implement forest management activities to ensure they protect wildlife habitat, water quality, and native species.	
Key partners	- DFS: lead / already working on this - DNREC including Fish and Wildlife - Parks & Rec
Resources to leverage	- Delaware Ecological Network through FirstMap may be a good visual resource for where habitat exists, both state and private, along with where focus areas should be for protection and expansion of core forest areas and corridors. - Statewide Forest Strategy - Agency management plans (expand to include forests) - Environmental review process
Steps	- Create a cataloguing methodology for habitats, native species, and invasives monitoring - Create forest management workforce training / guidance document for implementers

Obstacles and solutions	- Dedicated staffing and funding. Solution: All the network-building and education actions mentioned here
Notes/update from NWL Work Group	None

Preservation Strategy 3: Increase education, outreach and technical assistance to landowners and state/local leaders

Preservation 3.1. Market and promote existing funding and technical assistance programs available to support forest preservation and management, especially to private landowners and homeowners associations.

Key partners	- DFS: lead - Cooperative extension: outreach and implementation - State and local leaders and landowners: target audience - RASCL: could play key role in continuing collaboration and promoting education
Resources to leverage	NRCS cost-share program to copy / expand
Steps	- Dedicate staff to conduct outreach and promote programs - Require stewardship plan to be developed before properties can be purchased
Obstacles and solutions	None identified
Notes/update from NWL Work Group	- This could be supported by the creation of a Community Watershed Forester and quasi-extension program. - Coordinate this recommendation with Greening Strategy 3

Preservation 3.2. Increase accessibility of training and technical assistance for municipal staff and homeowners associations.

Key partners	- DFS - Municipal staff (especially newly elected leaders and managers), HOAs: target audience
Resources to leverage	Chesapeake Bay Program Local Government Guide to the Chesapeake Bay Module 4: Capitalizing on the Benefits of Trees
Steps	Adapt existing educational resources to be easily viewed - consider online modules (coordinate/combine this strategy with Community Greening Strategy 3)
Obstacles and solutions	None identified
Notes/update from NWL Work Group	None

Additional Feedback

In addition to the priority strategies described above, participants in this Goal Pathway emphasized a need to continue protecting forests through land purchase, by increasing budget allocations. One recommendation was to index budget allocations to land values so purchasing power can keep pace with land value increases.

Forests as a commodity

Commodities Strategy 1: Improve forest inventories and data/metrics tracking and reporting

Commodity 1.1. Leverage technology to improve accuracy of forest inventories and baseline data.	
Key partners	DFS (Urban Program uses field maps for tree inventory after plantings)
Resources to leverage	- CFIA (more advanced technologies are evolving) - Remote sensing technology - available and feasible
Steps	- Key question: How will this be measured and where do we currently stand? - Important parameters include cover type, tree age, and forest classification.
Obstacles and solutions	- USDA Forest Inventory Assessment data is becoming increasingly inaccurate (there are only 22 inventory points; state does not have input into plot location); there are discrepancies between FIA data and state data. Solution: Utilize remote sensing technology. - Current funding limitations may hinder progress
Notes/update from NWL Work Group	None
Commodity 1.2. Establish metrics to quantify and track greenhouse gas benefits of forests and forest management practices – as well as consistent tracking and reporting systems.	
Key partners	- Regional / national partners to standardized metrics - There is a need to expand beyond Chesapeake Bay and integrate more GHG-related data, potentially via Air Quality Division.
Resources to leverage	- iTree - Delmarva Power has clean energy models—example: measuring benefits when municipalities invest in tree planting.

	- Existing databases contain records dating back to 1994; the Department of Agriculture maintains this data. Ag has initiated efforts related to water tracking (Chesapeake Bay) and is now working to include tree planting data. - Current tracking / reporting: includes pre-commercial thinning and wildfire data submitted to DNREC

Steps	- Remote sensing must be established first; significant analytical work is involved. Despite both tree removals and plantings occurring, aerial photography is necessary to better track changes.
	- Species composition and tree age are essential metrics.
	- Include these metrics in an annual report with a five-year update cycle
	- Determine:
	  - Need / effectiveness of DE metrics vs. national standards
	  - Process / timeline for creating an accurate baseline report

Obstacles and solutions	None identified
Notes/update from NWL Work Group	None
Commodity 1.3. Publicly share data on a regular basis, to inform decision-making, improve transparency, and guide future investments.	
Key partners	None identified
Resources to leverage	- UD Delaware First Map - central location for GIS data - DFS has a program dashboard with the number of trees planted in the number of years and dollars spent. DNREC Division of Stewardship's data is also public-facing
Steps	Assess data sharing needs and opportunities
Obstacles and solutions	Challenge of this being a long-term initiative. Solution: Report and celebrate incremental progress
Notes/update from NWL Work Group	None

Commodities Strategy 2: Promote the importance of Delaware forests and forest industries

Commodity 2.1. Expand and diversify markets (e.g., timber, biofuels, pulp, agroforestry, ecotourism).	
Key partners	- USDA: involved in upcoming training sessions out of state for agroforestry - DDA/DFS: oversees markets for traditional products (e.g., wood chips/shavings for animal bedding, Delaware-grown wood for state construction) - Governor's Council on Forestry: focused on attracting new industry - The Delaware Forestry Association: facilitates open exchange on forestry issues
Resources to leverage	- IRA funding supports progress toward agroforestry - National trend toward / interest in new markets - Active animal bedding market - Current programs utilizing urban trees for mulch (established) and compost (emerging) - Economic impact study of Delaware's forest industries (in progress; managed by Northeast-Midwest State Foresters Alliance)
Steps	Conduct research and training related to silvopasture and agroforestry practices (not currently established in Delaware)
Obstacles and solutions	Infrastructure limitations for traditional forestry needs such as sawmills and drying kilns (need access to highways and rail as well as power sources – limited by incinerator laws)
Notes/update from NWL Work Group	Will become increasingly important as resources become more scarce (and tariffs from Canada's wood pulp take effect)
Commodity 2.2. Influence public perception and energy policy (e.g. wood energy).	
Key partners	DFS
Resources	DFS marketing campaign to landowners, promoting forests and forestry

to leverage	
Steps	Determine: Is there a certified outreach specialist?
Obstacles and solutions	None identified
Notes/update from NWL Work Group	Need more staff and more outreach to municipalities
Commodity 2.3. Invest in workforce development to fill needs: sawmill operators, tree planters, arborists, foresters, and specialists in genetic materials.	
Key partners	- DFS (hosts annual tree care seminar which offers CEU credits; planning to bring on the arborist short course throughout the year so individuals can become certified) - Delaware universities and colleges (none currently provide a forestry major)
Resources to leverage	MD/DE Master Logger Volunteer Certification Program (managed by DDA)
Steps	- Engage employers - including industry and state agencies - to understand workforce gaps - Engage educational community to understand capacity for new educational programming - Investigate feasibility of creating a licensing program for foresters in DE
Obstacles and solutions	None identified
Notes/update from NWL Work Group	None
Commodity 2.4. Fill gaps in supply chains for native stock.	
Key partners	- Nurseries - Economic development partners

Resources to leverage	- Chesapeake Bay Program study of regional nursery stock supply needs - DFS will have an urban tree grow-out station up and running by spring 2026, to supply all trees planted within the Urban Program. Potential to expand to serve as state nursery in future.
Steps	- Assess supply chain needs - Conserve seed sources through conservation efforts
Obstacles and solutions	None identified
Notes/update from NWL Work Group	None

Commodities Strategy 3: Maintain and improve forest health and resilience

Commodity 3.1. Improve emergency response for disease and climate-related events.

Key partners	- DDA/DFS: lead - University of Delaware: supports research
Resources to leverage	- DFS' ongoing monitoring via drones and other tools - DFS' Forest Health Specialist implements proactive and reactive response to forest health threats such as native insects/exotic pests/diseases and partners with university and private industry staff to ensure optimum forest health along with tree vigor. - Maryland model: responsibility split between Department of Agriculture and Department of Natural Resources - Forest Resiliency Fund: supports forest health following disasters, including tree planting, invasive species control, and prescribed burns - EFRP: for more intensive emergencies
Steps	- Partner to conduct research on forest health issues, including the effects of disease, insects, invasive species, and climate change (DDA lacks staff such as an entomologist or pathologist)

	- Develop a comprehensive plan / standardized statewide protocol for responding to forest pests and disasters (including climate events)
Obstacles and solutions	Staffing issue. Need more monitoring.
Notes/update from NWL Work Group	None
Commodity 3.2. Address impacts of rising temperatures, increasing pests and disease, and other climate impacts.	
Key partners	- DFS - TNC
Resources to leverage	- DFS drone monitoring - TNC's Conservation Blueprint: marsh migration modeling and identification of high conservation value areas - Delaware Wild Lands' pilot adaptive plantings (long-leaf pine) - Mount Cuba Center's study of climate-resilient species
Steps	- Support cost-share programs for targeted efforts to stop new or isolated infestations of forest pests, including invasive plants and animals - Support additional species-specific research (e.g. Mt. Cuba Center)
Obstacles and solutions	None identified
Notes/update from NWL Work Group	None
Commodity 3.3. Ensure long-term forest resilience and environmental services (e.g., water quality, sequestration) through sustainable forest management on public and private land.	
Key partners	Forest Stewardship Program through DFS works with landowners on private lands ; manages forest lands for Wildlife and Parks

Resources to leverage	- DFS drone monitoring - DFS educational and technical outreach (incorporates resilience and environmental services) - Management plans on all DE forest lands; expansion planned - DFS programs to support sustainable forest management on private land (education, technical assistance, etc)
Steps	None identified
Obstacles and solutions	None identified
Notes/update from NWL Work Group	None

Additional Feedback

In addition to the priority strategies identified above, participants in this Goal Pathway discussed opportunities for reforestation/afforestation on state-owned lands. While Delaware state parks have a planting goal of 75,000 trees, staff capacity for implementation is limited. Further, state parks rely on leasing space for events in order to generate revenue; tree plantings May reduce available space and therefore income. Timber product cultivation may be more profitable in some cases. There was a suggestion that where afforestation isn't possible, alternatives like cover crops or conservation practices should be explored.

4. Appendices

Appendix A. Crosswalk of existing Delaware plans, reports, and strategies related to trees and forests

To lay the groundwork for workshop efforts around strategy prioritization, the UMD EFC project team completed a crosswalk of existing Delaware tree and forestry-related plans, reports and strategies, to identify overlapping goals, opportunities and gaps. The following plans and reports were reviewed:

- Delaware Wild Lands Strategic Plan 2024-2029 (2025)
- Delaware Tree Canopy Action Plan (Chesapeake Bay Tree Canopy Policy and Funding Roundtable), University of Maryland Environmental Finance Center, Chesapeake Bay Program Office (2023)
- Delaware Riparian Forest Buffer Action Strategy, DNREC (2022)
- Comprehensive Conservation and Management Plan, Delaware Center for Inland Bays (2021)
- Delaware Climate Action Plan, DNREC Division of Climate, Coastal and Energy (2021)
- Delaware's Natural and Working Lands: A Policy Report for Supporting Carbon Benefits, University of Delaware Cooperative Extension (2021)
- Delaware Statewide Forest Strategy, Delaware Forest Service (2020)
- Delaware's Chesapeake Bay Watershed Implementation Plan: Phase 3, Delaware's Chesapeake Bay WIP Steering (2019)
- Delaware Forests: 2018 Summary Report, USDA (2018)
- Delaware Wildlife Action Plan, DNREC Division of Fish and Wildlife (2015)

This plan crosswalk resulted in the distillation of three broad Goal Pathways, each with a set of related strategies and actions. These lists were the starting point for discussions and prioritization efforts during the Delaware Tree and Climate Workshop, as described in Section 2.

Goal pathway: COMMUNITY GREENING: Enhancing tree canopy and greenspaces in urban and suburban areas, to maximize carbon sequestration and storage, improve public health and quality of life, mitigate heat island effects, protect water quality, and achieve other social, economic and environmental benefits.

Strategy 1: Improve data and tracking (2,9)	
Action 1.1	Maintain an updated, accurate inventory of Delaware's forests, including urban and suburban tree canopy
Action 1.2	Create updated data/datasets for urban tree canopy and greenspaces
Action 1.3	Train local governments and other other partners on the use of tracking and reporting tools, such as i-Tree

Action 1.4	Identify/develop metrics to quantify the carbon sequestration benefits of urban trees and other urban green practices (e.g. meadow planting)
Strategy 2: Protect existing urban tree canopy, forest buffers, and greenspaces (3,8,9,10)	
Action 2.1	Review full extent of urban tree/RFB-protective ordinances and standards in place
Action 2.2	Assemble/develop model ordinances and standards to protect trees/RFBs/greenspaces. Share with counties/municipalities. Include details regarding climate benefits, how trees/buffers will address permitting issues such as MS4s, and the value of trees/buffers as natural capital assets
Action 2.3	Adopt county/municipal codes and ordinances to include environmental and resource protection standards including requirements for urban trees, riparian forest buffers, open space, and wetlands. Use New Castle County's code as a model.
Action 2.4	Enhance tree care and maintenance. Partner with conservation districts or nonprofits, add dedicated state staff, and/or pursue partnerships for contract management.
Strategy 3. Increase urban tree plantings and urban riparian buffers (1,2,3,4,8)	
Action 3.1	Establish/update urban tree canopy and RFB goals at the county/municipal level
Action 3.2	Review/assemble ordinances that make it easier to plant trees
Action 3.3	Maintain and increase dedicated funding and technical assistance for tree planting (e.g. TEDI, DFS community forestry matching grant program). Include maintenance set-asides.
Action 3.4	Pursue partnerships to afforest vacant space and convert turf to trees/greenspaces (state agencies, county/municipal government, homeowners associations, schools, nonprofits)
Action 3.5	Identify target RFB locations at the local level, including impaired waterways
Action 3.6	Train staff and private landscaping providers to identify appropriate species for forested buffers
Action 3.7	Implement a cost-share state buffer program to restore or create forest buffers by working with landowners and local entities
Strategy 4. Maintain and increase funding for urban greenspace programs (2,3,8,9)	
Action 4..1	Effectively deploy current urban greenspace funding programs (e.g. Delaware Urban and Community Forestry Program, Community Water Quality Improvement Grant)
Action 4.2	Increase availability of dedicated funding specifically earmarked for forest buffers
Action 4.3	Provide funding for RFB maintenance within grant programs, via direct payments or cost share
Strategy 5. Increase education, outreach, and technical assistance for urban greenspaces (2,8,9,11)	
Action 5.1	Convene partner organizations to strategically plan how education, outreach and technical assistance (to local governments, landowners, general public) can be done most effectively.
Action 5.2	Deliver training to county/municipal staff on priority topics, (e.g. tree canopy goals and ordinances; data and tracking; urban forest management plans; value of urban trees; trees for stormwater mitigation;

	funding and technical assistance)
Action 5.3	Implement demonstration projects that address and highlight the benefits of trees (e.g. public health and quality of life, heat island effects mitigation, water quality protection, and other social and environmental benefits)
Action 5.4	Continue to host the annual Delaware Arborist and Tree Care Seminar for tree care professionals; invite city and county facilities management staff to participate as well; offer targeted training on best management practices to minimize harm to trees
Strategy 6. Grow the number of urban forestry professionals (2,8)	
Action 6.1	Provide training opportunities to increase in the number of International Society of Arboriculture (ISA) certified arborists registered in Delaware
Action 6.2	Increase the number of municipalities with a certified arborist/urban forester on staff
Action 6.3	Inventory existing workforce development programs for tree care professionals and identify gaps and opportunities (suggested partners: DFS, Dept of Labor, colleges and universities)

Goal pathway: FOREST PRESERVATION AND CONSERVATION

Protecting and managing forests to improve wildlife habitat, water quality, carbon sequestration and storage, and resilience.

Strategy 1. Improve forest inventories and data/metrics measurement and tracking (1,2,3,5,7,9,11)	
Action 1.1	Maintain an updated, accurate inventory of Delaware's forests (public and private / rural and urban) covering forest types, species, age, growth, biomass, and removals. Update aerial imagery to delineate forest extent and boundaries
Action 1.2	Better understand economic benefits of resource protection and valuation of natural assets including trees. Take into account other co-benefits of trees/buffers, such as climate markets and MS4 compliance
Action 1.3	Identify / develop metrics to quantify the GHG (carbon sequestration and storage) benefits of forest management practices
Action 1.4	Improve tracking and reporting of forest management practices (to account for GHG benefits offered by forest management practices, it is necessary to have a robust program in place so that the total number of acres receiving each management treatment can be quantified)
Strategy 2. Prioritize forest preservation, conservation, and management activities (1,2,3,5,8,9,10)	
Action 2.1	Coordinate among state agencies to identify highest-priority forest preservation and conservation areas (including headwater forests, large contiguous forest blocks, forested wetlands) and determine methods to align approaches. Share preservation priority areas with local and county land use decision makers.
Action 2.2	Conduct desktop analysis to identify existing RFBs and opportunities for expanded RFBs; work with counties and municipalities to utilize existing subdivision layers, land use layers, etc., and then follow up with onsite verification
Action 2.3	Identify critical forested blocks for connection using tree plantings to improve forest connectivity

Action 2.4	Incorporate the Delaware Wildlife Action Plan and species of greatest conservation need into forest conservation, protection, and management activities
Action 2.5	Review USDA's Forest Inventory and Analysis data to detect trends in forest resources and develop appropriate forest management recommendations
Action 2.6	Establish maintenance and restoration goals for forest types (including bald cypress, Atlantic white cedar, etc)
Action 2.7	Establish and identify areas on state-owned lands to manage for old-growth characteristics
Action 2.8	Identify additional opportunities for reforestation / afforestation on state-owned lands
Strategy 3. Permanently protect forests through acquisition and easements (1,2,3,5,9,10,11)	
Action 3.1	Permanently protect forest areas and headwater forests through conservation easements or fee acquisition. Prioritize fee simple acquisition for lands containing riparian corridors, at-risk wildlife, rare habitats, headwater forests, forested wetlands, and forested groundwater recharge areas.
Action 3.2	Maintain funding for conservation easements, including the Forest Legacy Program; Open Space Program; County funds; and nongovernmental funding sources
Action 3.3	Maintain dedicated funding for the Delaware Forestland Preservation Program, including funds from the Clean Water Advisory Council
Action 3.4	Fully utilize funding for forest preservation programs (less than half of the allocated funding for the Forestland Preservation Program is used each year in Delaware)
Action 3.5	Once existing allocations are fully utilized, increase annual budget allocations to further enhance preservation efforts
Strategy 4. Protect forests through legislation, regulation, and incentives (2,8,9,10)	
Action 4..1	Adopt a statewide forest preservation policy
Action 4.2	Incorporate forest preservation and conservation into land use planning, including comprehensive plans.
Action 4.3	Identify, develop, and establish forest/tree/RFB protection codes and ordinances.
Action 4.4	Investigate development incentives for forest preservation (e.g. amending county zoning law to award bonus density in designated growth areas in exchange for preserving high-priority forests)
Strategy 5. Maintain and restore forests for water quality, wildlife, and climate resilience (2,5,8,10,11)	
Action 5.1	Monitor forest management practices to ensure they protect water quality and wildlife habitat
Action 5.2	Maintain, enhance, and delineate wildlife habitat, particularly endangered and/or threatened plant and animal species habitat (including state rare species) during forest management activities
Action 5.3	Conduct research to maintain and improve forest productivity, such as using excess poultry manure and/or municipal wastewater as fertilizers
Action 5.4	Ensure state-funded tree planting projects are adequately maintained

Action 5.5	Consider legislation requiring certification for tree care professionals operating in Delaware
Action 5.6	Enhance forest maintenance on private property by leveraging partnerships (e.g. conservation districts, nonprofits)
Action 5.7	Consider future climate conditions in forest management decisions: integrate climate-resilient species into reforestation/afforestation projects; develop strategies to manage impacts of climate change on coastal forests (e.g. felling "ghost forests" for ecosystem services)
Strategy 6. Utilize prescribed fire for GHG benefits and wildlife habitat enhancement (2,9)	
Action 6.1	Identify / develop metrics to quantify the GHG benefits of prescribed fire (in addition to wildlife habitat restoration and other benefits)
Action 6.2	Provide prescribed fire expertise and assistance for silvicultural and wildlife habitat enhancement projects
Action 6.3	Annually treat at least 250 acres to maintain/restore fire-adapted ecosystems
Action 6.4	Maintain a statewide operational and safety standard for prescribed burning based on NWCG standards
Action 6.5	Establish a Delaware Prescribed Burn Council to support state and other agencies with fire implementation
Action 6.6	Change current burn law to allow special permits during the burning ban (May 1 - September 30)
Strategy 7. Increase education, outreach and technical assistance to landowners and state/local leaders (2,9,11)	
Action 7.1	Increase technical assistance to landowners to help them develop forest stewardship plans
Action 7.2	Conduct strategic marketing of the Forestland Preservation Program to enroll more acres in what is currently an underutilized program
Action 7.3	Explore opportunities to provide forest and tree management information to new landowners, homeowners, and homeowner associations (HOAs)
Action 7.4	Continue to host the annual Delaware Arborist and Tree Care Seminar for tree care professionals; invite city and county facilities management staff to participate as well; offer targeted training on best management practices to minimize harm to trees
Action 7.5	Promote the importance of forest markets and the forest industry to state legislators and key decision makers through annual forest industry status updates
Action 7.6	Provide training and technical assistance to municipalities and civic associations, related to urban forest preservation and management
Strategy 8. Increase students' and teachers' understanding of forest preservation, conservation and management (2)	
Action 8.1	Establish a working group through Delaware Association for Environmental Education (DAEE) to support new and existing school-based outdoor learning centers and develop best practices for their curriculum and use
Action 8.2	Incorporate Children in Nature curriculum into schools
Action 8.3	Incorporate Project Learning Tree (PLT) curriculum into pre-service programs at Delaware college and

	university teaching programs
Action 8.4	Incorporate forestry into the implementation of the new statewide Environmental Literacy Program (ELP)
Action 8.5	Continue maintaining the two State Forest Education Centers and promote them for use in local school curricula
Action 8.6	Continue providing forestry educational programs to elementary schools (Arbor Day, Smokey Bear, etc)
Action 8.7	Work with partners and continue providing natural resources learning opportunities outside the classroom (Envirothon, 4-H, etc)

Goal pathway: FORESTS AS A COMMODITY

Improve forest health, productivity, and benefits, to promote vibrant sustainable forest product markets, keep forest land forested, and maximize carbon sequestration and storage.

Strategy 1. Improve forest inventories and data/metrics tracking and reporting (1,2,5,9)	
Action 1.1	Improve statewide forest/wood inventories, covering forest types, species, biomass, and harvest volumes. Review/update USDA Forest Inventory Assessment.
Action 1.2	Identify/develop metrics to quantify the GHG (carbon sequestration and storage) benefits of forests and forest management practices. Consider metrics that can be publicly shared.
Action 1.3	Improve tracking and reporting of forest management practices to account for GHG benefits.
Action 1.4	Identify additional opportunities for reforestation/afforestation, especially on state-owned lands.
Strategy 2. Maintain and improve forest health (2,5,7,9,11)	
Action 2.1	Monitor forests for disease, pests (plant and animal, native and introduced), climate impacts and other threats. Use aerial and ground surveys.
Action 2.2	Partner to conduct research on forest health issues, including the effects of disease, insects, invasive plants and animals, and climate change.
Action 2.3	Maintain/update DDA's Natural Disaster/Forest Health Response Plan for forest pests and natural disasters. Include climate considerations.
Action 2.4	Support cost-share programs for targeted efforts to stop new infestations or isolated infestations of forest pests including invasive plants and animals.
Action 2.5	Ensure adequate succession of aging timberland via period assessments of forest stand size and ages. Consider supplementing USDA Forest Inventory and Analysis information.
Action 2.6	Develop strategies for climate change / sea level rise impacts on forests, especially coastal. Integrate species that are more likely to thrive in hotter, wetter environments (especially in northern parts of the state).
Action 2.7	Support private forest landowners in sustainably managing their land: provide education, outreach and technical assistance (e.g. Delmarva Forestry Seminar); maintain and enhance cost share programs (EQIP, SCP); complete landowner survey; develop program to reach small woodlot owners; increase the number of privately-owned forests under management plans.

Action 2.8	Increase sustainable management on state-owned forest lands: increase percentage of state-owned forests under active forest management plan; develop a shared stewardship agreement between the DDA and DNREC to expand agency expertise and management techniques to more state-owned forestlands.
Action 2.9	Implement forest practices for carbon sequestration and storage. 9
Strategy 3. Promote the importance of Delaware forests and forest industries (2,9,11)	
Action 3.1	Create an updated economic impact study of Delaware's forest industry. 2
Action 3.2	Complete a Delaware Forest Service marketing plan that includes a public campaign to promote forests and forestry. 2
Action 3.3	Provide annual forest market status update to state and federal legislators. 2
Action 3.4	Support Governor's Council on Forestry's effort to attract forest industries (traditional and newer markets) to the state. 9
Action 3.5	Conduct outreach around the benefits of forest harvesting to remove the negative stigma associated with cutting down trees. 9
Strategy 4. Maintain and expand opportunities for traditional forest markets (2,9,11)	
Action 4.1	Continue providing educational programs for forestry operators including MD/DE Master Logger Volunteer Certification Program.
Action 4.2	Engage forestry operators to discuss opportunities and challenges. 2
Action 4.3	Identify and create new markets for traditional products, e.g. wood chips/shavings for animal bedding, Delaware-grown wood for state construction projects. 2
Strategy 5. Create markets for low-quality fiber and biofuels (2,9)	
Action 5.1	Address the restrictions on wood/biomass energy facilities by Delaware's incinerator law.
Action 5.2	Promote Fuels for Schools program. Attempt to have schools or other state-owned facilities converted to wood for heating and cooling.
Action 5.3	Explore and promote biofuel plantation development.
Action 5.4	Identify potential international bioenergy markets that can be serviced by Delaware's forest products industries through the Port of Wilmington.
Strategy 6. Create and support markets for non-traditional forest products: ecosystem services, agroforestry, agritourism, carbon markets, urban wood utilization (2,3,9)	
Action 6.1	Promote and facilitate markets for agroforestry and agritourism; look for opportunities to achieve co-benefits (including water quality) while establishing these markets
Action 6.2	Promote the inclusion of forestry practices in voluntary carbon markets
Action 6.3	Address barriers to private landowners participating in carbon markets

Action 6.4	Enhance the opportunity for forest management and urban forestry carbon credits through RGGI
Action 6.5	Develop urban wood utilization markets and an urban wood utilization toolkit (carbon storage)

Appendix B. Workshop agenda

Delaware Tree and Climate Workshop

April 3, 2024 | 8:00 am - 3:30 pm
Modern Maturity Center | 1121 Forrest Ave, Dover, Delaware

8:00 - 9:00	**Registration and continental breakfast** *Coffee, tea, pastries*
9:00 - 9:10	**Welcome and introductions** *Susan Love, Administrator, Climate and Sustainability Section, DNREC Division of Climate, Coastal and Energy* *Brandy Espinola, Program Director - Climate and Sustainability, University of Maryland Environmental Finance Center*
9:10 - 9:45	**Keynote: Advancing tree equity for health equity and climate action** *Jad Daley, President & CEO, American Forests*
9:45 - 10:35	**Panel: Delaware forestry and climate goals and trends** *Brandy Espinola, UMD EFC* *David Edgell, Director, Delaware Office of State Planning Coordination* *Susan Love, DNREC Division of Climate, Coastal and Energy*
10:35 - 10:50	**BREAK**
10:50 - 11:55	**Work session #1: Building alignment around tree and climate priorities**
11:55 - 12:15	**Report-outs**
12:15 - 1:15	**LUNCH**
1:15 - 1:35	**Success stories** *Marcia Fox, Executive Director, Delaware Wild Lands*
1:35 - 3:00	**Work session #2: Outlining implementation steps**
3:00 - 3:20	**Report-outs**
3:20 - 3:30	**Wrap-up and next steps**

ENVIRONMENTAL FINANCE CENTER

Appendix C. Workshop program

About the workshop

The Delaware Tree and Climate Workshop is a one-day event designed to convene partners from across Delaware to focus on state priorities relating to climate resilience, forestry, urban trees, and natural and working lands. The objectives of this event are to:

- Identify tree, forest, and natural and working land priorities to achieve climate goals, particularly to inform Delaware's 2025 Climate Action Plan
- Develop implementation steps (tasks, timelines, partners) to achieve these priorities

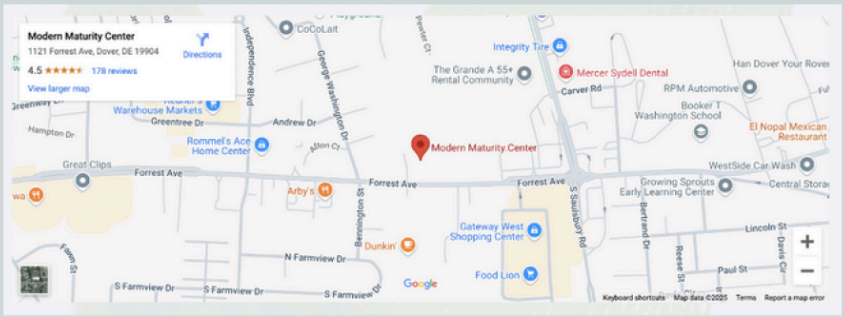
The workshop is hosted by the DNREC Division of Climate, Coastal and Energy in cooperation with the Delaware Forest Service and other stakeholder partners, with support and facilitation provided by the University of Maryland Environmental Finance Center.

Following the Workshop, findings and recommendations will be compiled into a summary report available to the public and posted on the Tree for Every Delawarean website.

Location information

Modern Maturity Center

1121 Forrest Avenue
Dover, DE 19904



Parking and entrance

Parking is available onsite, at the rear of the building. Please enter the building through the door indicated on the map below.

Agenda

8:00	**Registration and continental breakfast**
9:00	**Welcome and introductions** Susan Love, Administrator, Climate and Sustainability Section, DNREC Division of Climate, Coastal and Energy Brandy Espinola, Program Director - Climate and Sustainability, University of Maryland Environmental Finance Center
9:10	**Keynote: Advancing tree equity for health equity and climate action** Jad Daley, President & CEO, American Forests
9:45	**Panel: Delaware forestry and climate goals and trends** Brandy Espinola, UMD EFC (moderator) David Edgell, Director, Delaware Office of State Planning Coordination Susan Love, DNREC
10:35	**BREAK**
10:50	**Work session #1: Building alignment around tree and climate priorities**
11:55	**Report-outs**
12:15	**LUNCH**
1:15	**Success stories** Marcia Fox, Executive Director, Delaware Wild Lands
1:35	**Work session #2: Outlining implementation steps**
3:00	**Report-outs**
3:20	**Wrap-up and next steps**
3:30	**Adjourn**

Speakers

listed in speaking order

Susan Love

Administrator, Climate and Sustainability Section, Division of Climate, Coastal and Energy, Delaware Department of Natural Resources and Environmental Control

As Climate and Sustainability Section Administrator, Susan directs programs to adapt to climate change, mitigate greenhouse gas emissions, and promote sustainable development policies throughout the state. Recently this work included the completion of the state's first comprehensive Climate Action Plan and programs to facilitate electric vehicle deployment. Previously, she worked for the Delaware Coastal Programs, where she led the development of the state's Sea Level Rise Vulnerability Assessment and Adaptation Plan. In addition to her climate change and sustainability projects, Susan led the development of the South Wilmington Special Area Management Plan, which addressed a range of urban social and environmental issues in a vulnerable and underserved community, and led implementation of the Pea Patch Island Special Area Management Plan, which ensured the longevity and productivity of heron nesting habitat. Susan has also spent considerable time engaged with local government planning, wetland policy and permitting issues, and shorebird and horseshoe crab population monitoring. Susan holds a Masters of Public Administration (MPA) and a Bachelor's of Science in Agriculture, both from the University of Delaware. She also holds an AICP accreditation from the American Planning Association.

Brandy Espinola

Program Director - Climate and Sustainability, University of Maryland Environmental Finance Center

Brandy has experience working at the federal, state, and local level to provide technical assistance across a broad array of social, environmental, and fiscal policy issues. As UMD EFC's Climate and Sustainability Program Director, Brandy works closely with local stakeholders to identify key issues, goals, and obstacles to facilitate local solutions. She serves on the American Society of Adaptation Professionals Funding and Finance Group Leadership Team and leads the Sustainable States Network GHG Working Group. Brandy also serves on the Maryland Commission on Climate Change (MCCC) Adaptation and Resiliency Working Group (ARWG) and the Climate Justice Steering Committee where she contributes to State efforts to evaluate and adopt strategies for combating climate change in an equitable manner for all Marylanders.

Speakers

listed in speaking order

Jad Daley

President and Chief Executive Officer, American Forests

Daley is the 40th President and CEO of American Forests, centering the nation's oldest forest conservation NGO on climate change and social equity and overseeing near ten-fold organizational growth since 2018. Daley has been a pathfinder on nature-based solutions, having co-founded the Forest-Climate Working Group in 2007 and established the first climate change program at The Trust for Public Land in 2010. In 2024, Daley was named to the TIME Climate 100 and Washingtonian 500 in recognition of his longstanding climate leadership.

Daley serves as Co-Chair for the U.S. Chapter of 1t.org and as a member of the U.S. Forest Service Forest Research Advisory Council. He has been a lead author and advocate on historic federal policy wins, including the federal REPLANT Act, forest provisions of the Inflation Reduction Act, Highlands Conservation Act, and legislation establishing the U.S. Forest Service Community Forest Program. Daley is a widely published writer, from peer-reviewed research on climate-smart forestry to opinion pieces in outlets such as TIME, New York Times, Washington Post, The Hill, and more. Daley has a B.A. from Brown University and a Master's degree in environmental law and policy from Vermont Law School.

David L. Edgell, AICP

Director, Delaware Office of State Planning Coordination

David serves as the Director of the Delaware Office of State Planning Coordination (OSPC). The mission of the OSPC is the continuous improvement of the coordination and the effectiveness of land use decisions made by state, county and municipal governments while building and maintaining a high quality of life in the State of Delaware. Prior to being appointed Director, David served as a Principal Planner with the OSPC for eighteen years. His responsibilities included coordinating State land use priorities and resources with county, municipal and development interests, statewide land use planning, school siting, capital and facilities planning, demographics, and integrating land use planning into the State budget process. David has also worked at the University of Delaware's Institute for Public Administration assisting small towns with planning, zoning and governance issues and for the City of Dover, where he helped draft Dover's comprehensive plan and managed the City's development review process.

Speakers

listed in speaking order

Marcia Fox

Executive Director, Delaware Wild Lands

Marcia Fox, Executive Director of Delaware Wild Lands, Delaware's oldest and largest land trust, is a native Delawarean with a lifelong passion for conservation. An alumna of Delaware State University, Marcia brings over 20 years of experience in program management, partnership engagement, and policy analysis. Before joining DWL, she led key initiatives at the Delaware Department of Natural Resources and Environmental Control (DNREC), playing a vital role in restoring the Chesapeake Bay and launching programs focused on riparian buffers and backyard conservation.

Throughout her career, Marcia has worked to enhance land management so that Delaware's natural resources can thrive. She has partnered with private landowners and communities on habitat restoration, water quality protection, and sustainable land use—managing stormwater and drainage programs, reducing nonpoint source pollution, and fostering collaboration between state and federal agencies. In her role at Delaware Wild Lands, she applies her expertise directly to the stewardship of over 22,000 acres, ensuring that these landscapes remain healthy, resilient, and protected for future generations.

Goal pathways

During the Workshop, participants will be divided into discussion groups, each of which will discuss priority strategies and actions within one of three Goal Pathways. These Pathways mirror goals set forth in Delaware's 2021 Climate Action Plan, Delaware's 2020 Statewide Forest Strategy, and other state plans and reports. These Goal Pathways are:

COMMUNITY GREENING

Enhance tree canopy and greenspaces in urban and suburban areas, to maximize carbon sequestration and storage, improve public health and quality of life, mitigate heat island effects, protect water quality, and achieve other social, economic and environmental benefits.

FOREST PRESERVATION

Protect and manage forests to improve wildlife habitat, water quality, carbon sequestration and storage, and resilience.

FORESTS AS A COMMODITY

Improve forest health, productivity, and benefits, to promote vibrant sustainable forest product markets, keep forest land forested, and maximize carbon sequestration and storage.

Each Goal Pathway includes a set of related strategies and actions identified in Delaware plans and reports. These "strategy sheets" will be the starting point for discussions during the event, and they can be viewed here:

- Community greening
- Forest preservation and conservation
- Forests as a commodity

Appendix D. Workshop materials

Presentation slides

- **Keynote: Advancing tree equity for health equity and climate action**
  Jad Daley, President & CEO, American Forests
- **State Planning Issues and Land Use Trends**
  David Edgell, Director, Delaware Office of State Planning Coordination
- **The Importance of Trees in Delaware's Climate Change Strategy**
  Susan Love, DNREC Division of Climate, Coastal and Energy
- **From Vision to Action: Collaborative Wins for Trees, Forests, and Climate**
  Marcia Fox, Executive Director, Delaware Wild Lands
- **UMD EFC all slides**
  Brandy Espinola, Program Director - Climate and Sustainability, University of Maryland Environmental Finance Center

Work session materials

- Worksheets - work session 1
  - Community greening
  - Forest preservation and conservation
  - Forests as a commodity
- Sample strategies from other states
  - Community greening
  - Forest preservation and conservation
  - Forests as a commodity

Appendix D. Acronyms

APA-DE = American Planning Association – Delaware Chapter

CAST = Chesapeake Assessment Scenario Tool

CBLP = Chesapeake Bay Landscape Professionals

CBPO = Chesapeake Bay Program Office

CCE = Division of Climate, Coastal, and Energy

CREP = Conservation Reserve Enhancement Program

DDA = Delaware Department of Agriculture

DelDOT = Delaware Department of Transportation

DNREC = Delaware Department of Natural Resources Control

DNREC CCE = DNREC Climate, Coastal and Energy

DTAP = Delaware Tree Assistance Program

DFS = Delaware Forest Service

DWL = Delaware Wild Lands

EFRP = Emergency Forest Restoration Program

GHG = Greenhouse Gas (carbon sequestration and storage)

HOA = Homeowners Association

ISA = International Society of Arboriculture

LULC = Land Use/Land Cover

MS4 = Municipal Separate Storm Sewer System

NRCS = Natural Resources Conservation Service

NWL = Natural and Working Lands

OSPC = Office of State Planning Coordination

RASCL = Resilient and Sustainable Communities League

TEDI = Tree for Every Delawarean Initiative

TNC = The Nature Conservancy

UCF = Urban and Community Forestry

UD = University of Delaware

UMD EFC = University of Maryland Environmental Finance Center