Commission for the Innovation and Advancement of Carbon Markets and Sustainable Tree Plantings

July 29, 2022
Regular Meeting
Meeting Agenda

- **2:00-2:10pm** - Welcome and updates
- **2:10-2:25pm** - MDE presentation
- **2:25-2:45pm** - Facilitated discussion and questions
- **2:45-3:00pm** - MDOT presentation
- **3:00-3:20pm** - Facilitated discussion and questions
- **3:20-3:30pm** - Public comment
Draft Work Plan and Timeline
(Meetings on Fridays – 2-3:30pm)

• July 8
  o Progress report from CBT
  o Key challenges/opportunities

• July 29
  o Progress reports from MDE & MDOT
  o Key challenges/opportunities

• August 19
  o Progress reports from MDA & DNR
  o Key challenges/opportunities

• September 9
  o Walk through and discuss sections of draft report

• September 30
  o Walk through and discuss sections of draft report

• October 10 - Final Report Distributed

• October 21
  o Vote on final report

September 1 - Finish Draft Report

October 30 - Submit Final Report to General Assembly and Governor's Office
Vision

A **decarbonized** Maryland is focused on equity across its resilient communities, which are characterized by accessible green and blue spaces and supported by vibrant diverse economies.

**Trees and Forests** are a shared investment towards that future.
MDE’s Role in the 5m Trees Initiative

**Facilitate** tree tracking and accounting

**Coordinate** tree programs and planning

**Quantify** co-benefits, including carbon for the GGRA

**Develop** state standards & guidelines for carbon market engagement

**Enable** registration of quantified & verified environmental outcomes

**Maximize** opportunities for innovative private-public financing
Project Goals:

1. “One-stop-shop” for 5m trees resources
2. Clear instructions and apps for registering and tracking 5m tree plantings
3. Transparent spatial accounting of progress
5m Trees Hub and Tracking Tool

Site Functions:

1. Register tree planting projects with key information about site specific plantings

2. Maintain all spatial and non-spatial data in a state-accessible geodatabase, and

3. Publish project locations (point and/or polygon) on a public facing interactive online map.
Key considerations:

• Define required data from the beginning
• Ensure data can be leveraged towards co-benefit calc.
• Drive efficiencies across state partners

Example data collection:

• Project location (spatial boundary) and point locations of trees (geotagged)
  • Number and size of trees (caliper or seedings, etc)
  • Species of trees (to confirm native)
  • Primary entities supporting/doing the tree planting
  • Primary entities supporting tree maintenance/monitoring
• Whether activity qualifies for MS4 permitting or riparian buffers
• Any role of state agencies or CBT in tree planting project (yes/no, if yes, what role)
Tree Program Coordinator

• Goals:
  – Offer first line of communication with data submitters
  – Report progress relative to 5m tree goals
  – Support development of communication materials

• Functions:
  – Perform data quality assurance/quality control
  – Ensure no double counting or ineligible counting
  – Conduct data analysis and visualization
• Context:
  – Currently use state-of-the-art science to quantify annual statewide forest carbon fluxes in support of GGRA
  
  — **Challenge #1** - remote sensing algorithms find difficult to detect regrowth during early years of forest succession
  
  — **Challenge #2** - individual urban trees are not always detected with medium resolution satellite imagery
Project Goals:

• Utilize tracking platform data to reduce carbon uncertainties around small scale/indiv. tree plantings;

• Incorporate new data into official state GHG inventory with lower latencies than other methods; and

• Validate with optical remote sensing imagery to monitor tree growth or loss beyond a traditional 3-5 year period of active field maintenance.
Guidelines for Market Engagement

Common concerns:

• Inequitable access/impacts
• Pathway to regulation
• A way out of deep decarbonization

Opportunities to:

• Enable new investment
• Scale implementation
• Align with state goals
• Drive science-based approaches
Guidelines for Market Engagement

Examples:

• Clarify carbon ownership of projects co-funded by state dollars

• Establish quantification and verification standards for projects generating additional carbon outcomes

• Clarify conditions under which the state would pay for or procure additional environmental outcomes
Outcome Registration

• Establish a common registration system for verified environmental outcomes

• Why?
  – Vehicle to ensure high-quality standards/projects
  – Supports development of high-value premium credits
  – Potential for sale alongside other quantified/saleable environmental co-benefits (e.g., nutrient reductions)
  – Can open landowner access to broader marketplace
Using all tools in toolbox, including Cons Finance Act:

- Prioritization of green infrastructure financing (e.g., SRFs)
- Leverage private investment to generate additional environmental outcomes (e.g., pay-for-success contracting)
- Leverage federal infrastructure funding (e.g., NFWF/America the Beautiful Challenge)
- Connect state and local financing strategies to scale solutions (e.g., natural asset accounting)
Potential Topics for Discussion

1. Most important elements of hub/tracking site to support progress

2. How can we track co-benefits that might be outside of environmental outcomes like jobs/health outcomes?
MDOT Tree Mitigation

A Presentation for the Carbon Markets and Trees Commission Meeting

July 29, 2022
Presentation Overview

• Tree Solutions Now Act
• Maryland Tree Laws
• Transportation Considerations for Trees
• Avoiding and Minimizing Tree Impacts
• Mitigating Unavoidable Impacts
• Key Takeaways
• Recommendations on reviewing State policies to reduce and fully mitigate the clearing of trees during the construction of State highways and other transportation projects. (iv)

• A plan for reviewing future transportation procurement to minimize and fully mitigate tree clearing (xii)
Reforestation Law

*Maryland Reforestation Law* – applies to MDOT when any State funding is used for a linear highway construction activity and the total area of forest cut or cleared equals one acre or more.

Government is to minimize cutting or clearing and may only cut or clear the minimum number of trees necessary and consistent with sound design practices.

Every reasonable effort to minimize cutting or clearing shall be made.
Roadside Tree Law

*Maryland Roadside Tree Law* - This Law and its regulations were developed to protect roadside trees by ensuring proper care and protection and to ensure their compatibility with an efficient and dependable public utility system.

MDOT must obtain a Tree Care Permit from Maryland Department of Natural Resources before a roadside tree is trimmed or cut down. A permit is also required to plant a tree. Permits are good for one calendar year.
Forest Conservation Law

*Maryland’s Forest Conservation Act* - enacted to minimize the loss of Maryland's forest resources during land development by making the identification and protection of forests and other sensitive areas an integral part of the site planning process.

Applies to MDOT when any construction activity requires an application for a grading permit or sediment control permit on areas of 40,000 square feet or more - typically non-linear projects, such as park and ride locations.
Transportation Considerations About Trees

• Safety Setbacks
  • Transportation projects often require tree planting setbacks or height restrictions due to overhead or underground utility lines, to avoid obstructing sightlines, for physical safety, or for maintenance considerations
  • Some restrictions are based on federal transportation standards, such as trees near airports or near rail lines

• MDOT SHA Landscape Design Guide
  • Provides guidance on types, density, and other specifications for proposed tree plantings for transportation projects
  • MDOT SHA also compiles a preferred plants and sizes list
  • Includes factors to consider to support tree survival and success in reforested areas
Sound Transportation Design Practices

• Federal and State Regulations and Guidance
  • Maintain safe and reliable transportation conditions for roadway users
  • Protect valuable ecological habitat
  • Avoid impacts to forests and trees
  • When avoidance is not possible, minimize impacts
  • Mitigate impacts as necessary
How Do We Avoid or Minimize Tree Removal?

• Existing Laws, Regulations, Policies and Technical Guidance documents provide the foundation for MDOT's approach for minimization of tree impacts throughout a project, including during Planning, Design, and Construction

• Trees are identified during project planning to determine how they might be affected
  • This step also includes determining if any trees or plants within a project area are rare, threatened, or endangered

• Interagency Coordination
  • Coordination with DNR Forest Service
  • Request for Site Review Form for Reforestation Law
  • Roadside Tree Permit

• All transportation projects are subject to National Environmental Policy Act (NEPA) / Maryland Environmental Policy Act (MEPA)
NEPA/ MEPA

• Both NEPA and MEPA seek to avoid or minimize the environmental impacts of projects, and identify mitigation strategies for impacts that cannot be avoided early in project planning

• **NEPA** establishes an umbrella environmental policy and environmental planning framework for Federal agency decisions requiring environmental reviews to consider the potential impacts on the environment

• **MEPA** requires State agencies to prepare an Environmental Assessment Form (EAF) or Environmental Effects report (EER) for proposed projects that are State funded

• Whenever possible, trees impacts are avoided or minimized
Mitigating Unavoidable Impacts

Roadside Tree Law Mitigation

• The Law does not specify mitigation requirements, however MDOT SHA attempts to mitigate at the fullest extent possible, typically at least 1:1

• During Construction, MDOT SHA uses best practices to protect trees and critical root zones both within and immediately outside of the project Limits of Disturbance (root zones)
Forest Conservation Act Requirements

COMAR 08.19.04.08 Reforestation

• Conservation requirements are based on:
  o Net tract area
  o Existing forest
  o On-site forest retention and surrounding land use

• After impacts have been minimized, the forest conservation plan shall provide for:
  o Reforestation,
  o Purchase of credits from a forest mitigation bank, or
  o Payment into the State forest conservation fund
Reforestation Law Mitigation

• 1:1 replacement for the loss of forest cover, accomplished on an acre-for-acre; one-to-one ratio
• On public lands within a year of the completion of the project.
• Reforested areas must remain forested in perpetuity
• MDOT SHA works closely with DNR to establish off-site retention areas of existing forest that offset impacts at a ratio of 2:1 within the project watershed (protected in perpetuity)
Reforestation Law Mitigation (cont.)

- Mitigation Options in Priority Order:
  1. On-Site or ROW of construction
  2. On Public land in County or watershed where construction occurred
  3. In County or watershed where construction occurred
  4. If all options are exhausted – payment to the Reforestation Law Fund (managed by DNR)

- Planting Site Requirements
  - Open & unforested – at least ½ acre in size
  - Adjoining forests – at least ¼ acre in size
  - Free standing strip planting – at least 50’ wide
MDOT SHA
Reforestation
Minimum Planting

• Reforestation areas include those within the right-of-way easement owner or controlled by MDOT SHA
  • Species selected on site specific-basis, considering site conditions and reforestation goals
  • Reforestation using native plant material is encouraged
  • MDOT SHA typically mitigates to the fullest extent practical, often above the required mitigation ratios
MDOT SHA Reforestation Tracking

**FY 2022 MD Reforestation Law Annual Report**

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<th>Watershed (DNR #)</th>
<th>FMS #</th>
<th>Project Description</th>
<th>Approved Date</th>
<th>Forest Imp. (Acres)</th>
<th>Proposed On-Site Stabilization</th>
<th>On-Site Stabilization (Acres)</th>
<th>Off-Site Stabilization (Acres)</th>
<th>Fee-in-Lieu Amount</th>
<th>RETAILS Transfer Date</th>
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Projects planted/paid for in FY 2022:

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<th>Contract #</th>
<th>Watershed (DNR #)</th>
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<th>Project Description</th>
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<th>On-Site Stabilization (Acres)</th>
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<th>Fee-in-Lieu Amount</th>
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MDOT has strong policies and procedures in place to balance the preservation and replacement of trees with the safety and reliability of the State’s Transportation Systems.

MDOT uses sound planning and construction to attempt to avoid and minimize tree impacts as part of project design.

MDOT seeks to mitigate tree impacts to the fullest extent possible using the mechanisms that are available.

Opportunities for large scale tree planting projects within the existing State-owned Right of Ways are becoming less common.
Thank You!

Sandy Hertz
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Questions and Discussion
Commission Members and Implementation Leads
Public Comment Period

Please add name and affiliation in the chat box and we will take comments in the order received.
Staff Contact

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