

Maryland Forests – 2019 Listening Sessions



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**Forest Service Listening Sessions
For the 2020 Forest Action Plan
May 8-20, 2019**

Why a Forest Action Plan?

- Forest Action Plan started in 2010 (Assessment and Strategy)
- 5-year update in 2015
- Required in 2014 and 2018 Farm Bills
- Links to state Forest Action Plan required for US Forest Service grant funding (15% of budget)
- Helps big-picture planning
- Basis for further collaboration



Forest Action Plan

Timeline:

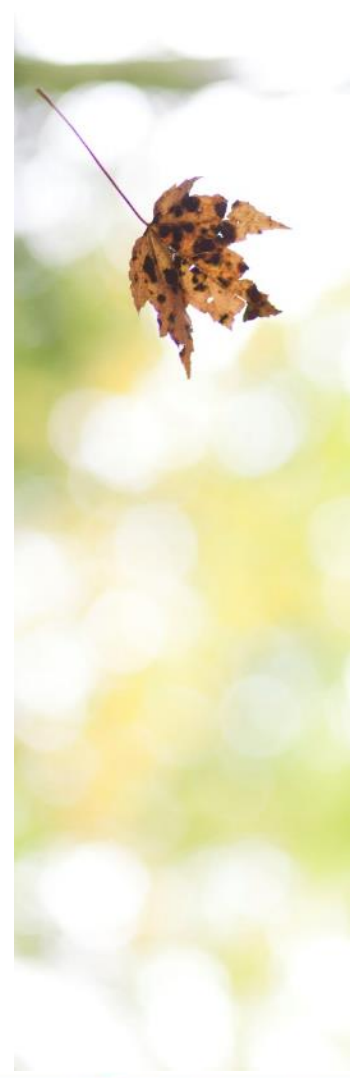
May/June 2019- Outreach and Assessments

July-Sep. 2019- Draft Plan

Oct/Nov. 2019- Distribute for Comments

December 2019- Finalize Draft

2020- Submit to USDA Forest Service for review and acceptance





Information in Maryland's Forest Action Plan

The **State Forest Resource Assessment** contains:

- 1. **Conditions and Trends** of Maryland's forest resources.
- 2. A vision for **Desired Future Conditions** for Maryland's forests and the services they provide.
- 3. **Threats and Opportunities**
- 4. **Priority Forest Landscapes and Areas**

The **Forest Resource Strategy** has:

- 1. A **Long Term Strategy** (~5 year) for addressing priority threats and opportunities, especially in priority forest landscapes and areas
- 2. **Timeline and Funding**
- 3. **Partner and Stakeholder Involvement**
- 4. **Multi-state Issues**
- 5. **Measures for Tracking Process**, and revising the Strategy accordingly.

The Forest Action Plan addresses the three national themes for the USDA Forest Service:



- **Conserve Working Forest Lands:** conserving and managing working forest landscapes for multiple values and uses.
- **Protect Forests From Harm:** protect forests from threats, including fire, catastrophic storms, flooding, insect or disease outbreaks, and invasive species.
- **Enhance Public Benefits from Trees and Forests:** including air and water quality, soil conservation, biological diversity, carbon storage, and forest products, forestry-related jobs, production of renewable energy, and wildlife.



National Theme: Conserve Working Forest Landscapes

Priority Issue I. Restore and Sustain Forest Landscapes

Goal I.A. Keep Forests as Forests

Goal I.B. Manage for Resilient Forests

Goal I.C. Support Traditional and Emerging Markets

Goal I.D. Demonstrate Sustainable Forest Management on Public Lands



National Theme: Protect Forests from Harm

Priority Issue II. Ensure Healthy and Resilient Forests

Goal II.A. Provide Emergency Response to natural resource threats

Goal II.B. Develop approaches to reduce threats from long-term stressors to forests

Goal II.C. Develop approaches to improve health and survival of urban forests



National Theme: Enhance Public Benefits from Trees and Forests



Maryland Priority Issue III. Ensure Clean and Abundant Water

Goal III.A. Revitalize the Chesapeake Bay and other priority waters

Goal III.B. From Forest to Faucet

Goal III.C. Avoid water quality impacts from needed forest management activities

Maryland Priority Issue IV. Create Jobs and Sustainable Communities

Goal IV.A. Use forests to support a robust and growing rural economy

Goal IV.B. Support Livable Green Communities

Maryland Issue V. Make Landscapes More Resilient to Climate Change

Goal V.A. Engage in Leadership for Climate Change

Goal V.B. Promote Sustainable Forest Management and Operations in Response to Climate Change

A Brief Introduction to Maryland Forests and Forestry

- 2017 MD forest is estimated by the USFS at 2,460,000 acres.
- ~76% of Maryland Forests are privately owned.
- Most common forest type is Oak-Hickory.
- Lost about 320k to 370k acres (gross) of forest since 1970 (about the size of Worcester Co MD), while population has grown from 3.9 to 6.1 million



Tree Cover and Forest Cover

Tree Cover (or canopy) is the total area of land covered by trees.

2011 UMD estimate was 3,095,099 acres.

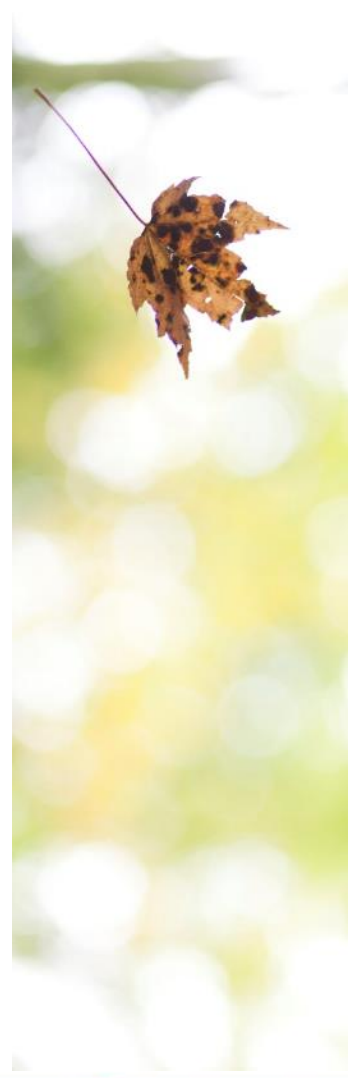
2013 Estimate using Chesapeake Conservancy data is 3,200,927 acres (all tree classes).

Forest Cover is a subset of tree cover, and meets a given definition.

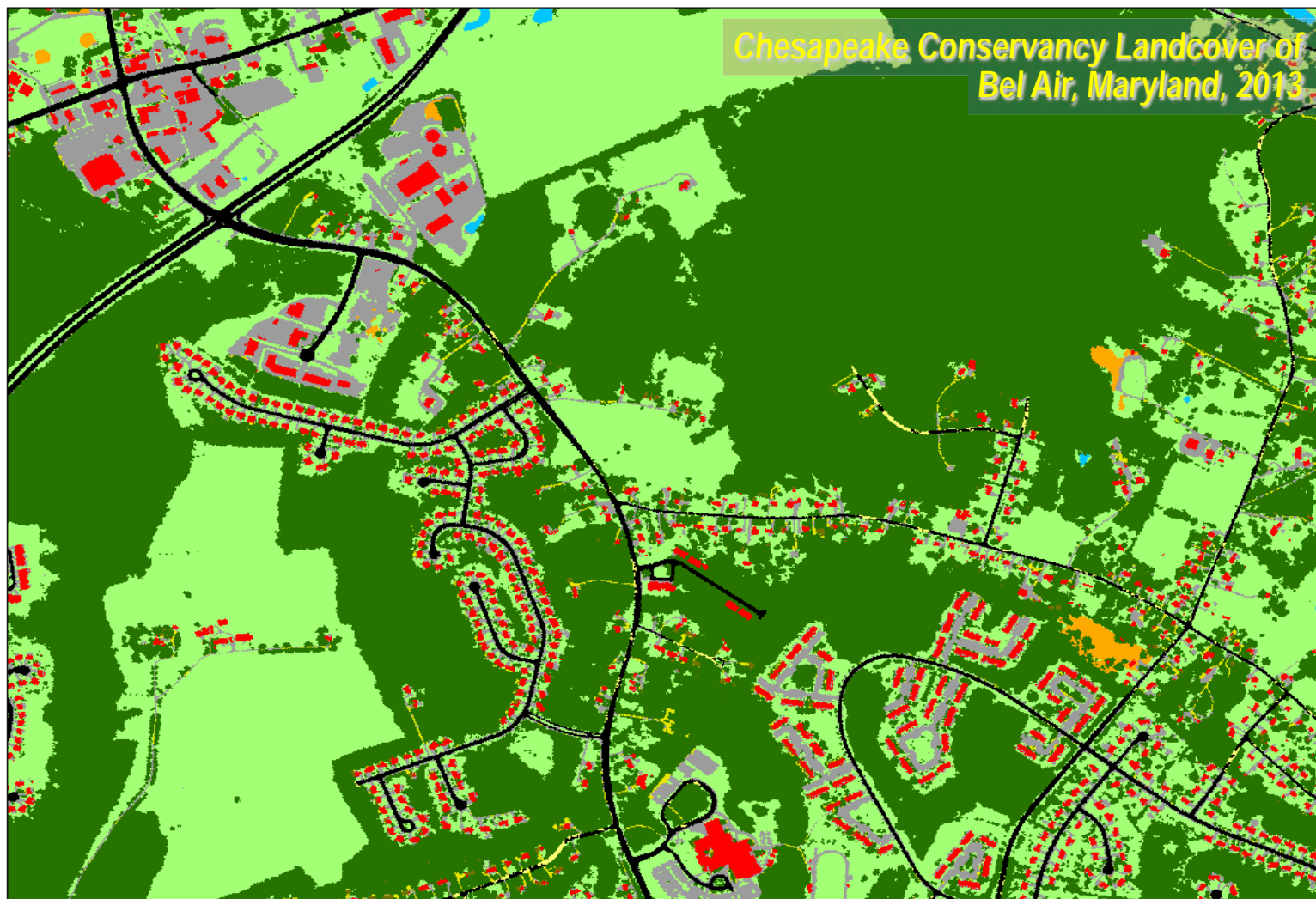
For some projects, the Maryland Forest Service has used the USDA Forest Service definition of *1 acre of area, with at least 10% tree canopy, and is at least 120 feet wide.*

The Forest Conservation Act (FCA) uses "a biological community dominated by trees and other woody plants covering a land area of 10,000 square feet or greater

- At least 100 trees per acre, with at least 50% of those trees having a 2 inch or greater diameter at 4.5 feet above the ground
- Includes forest areas that have been cut but not cleared, not including orchards



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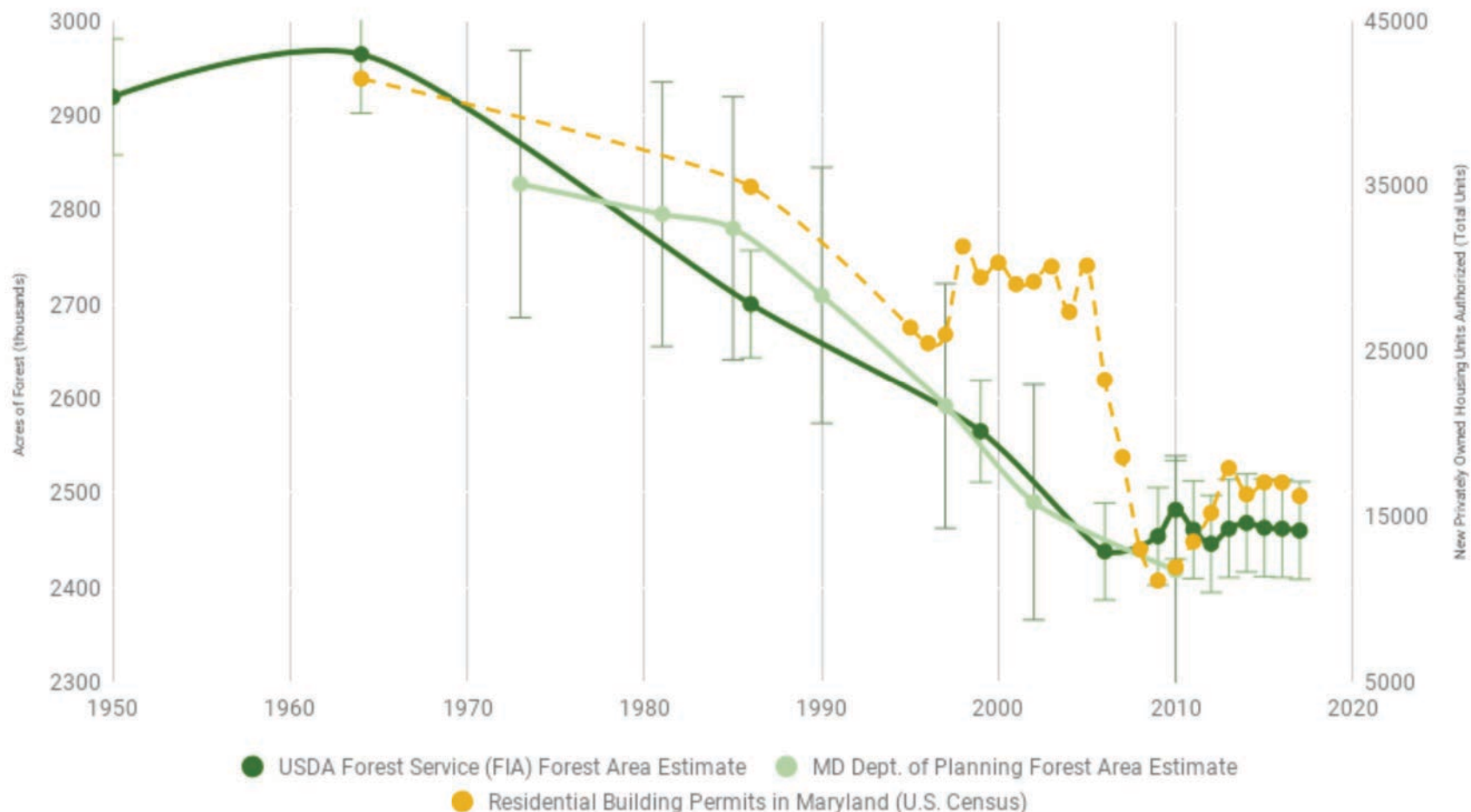


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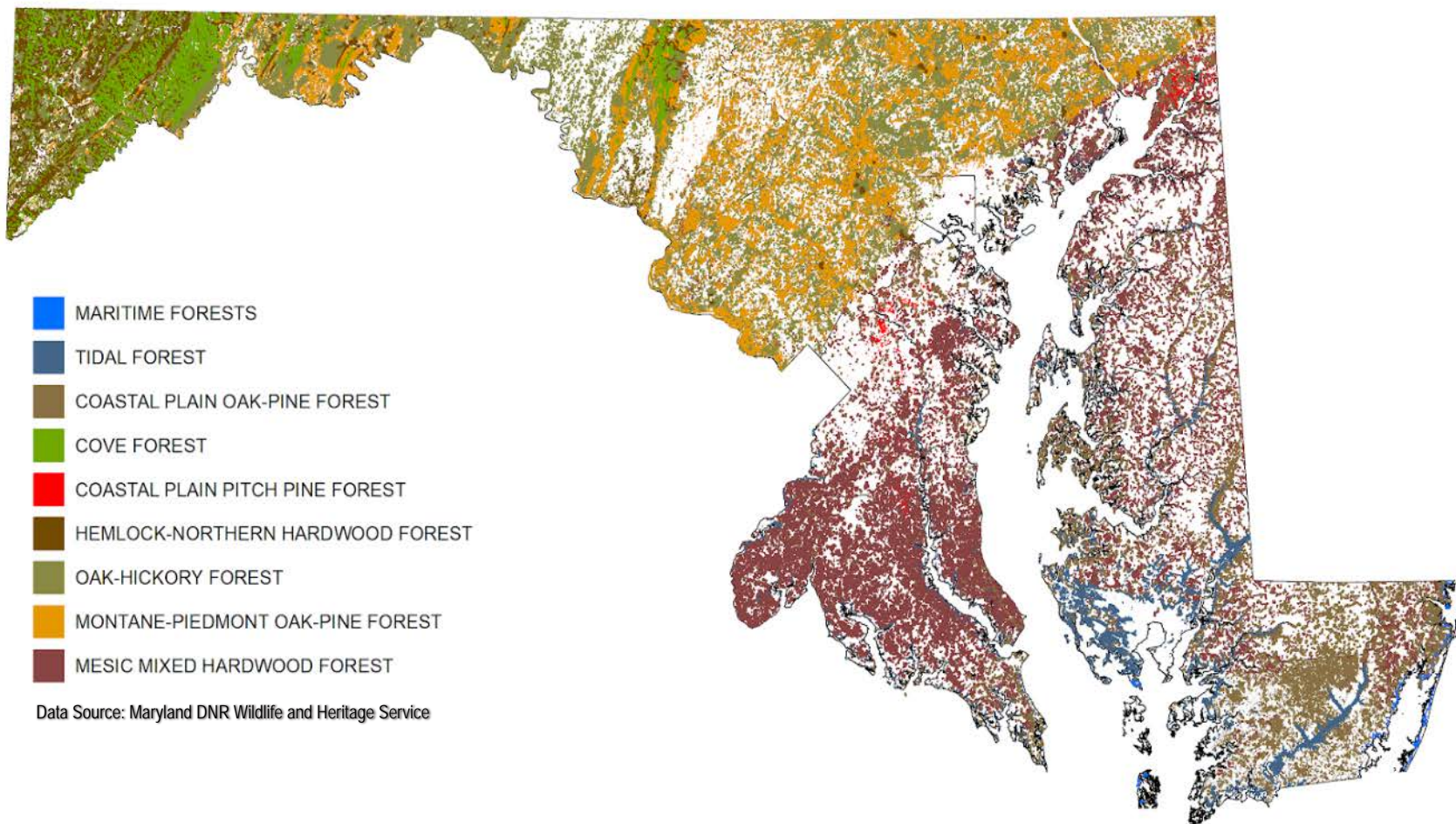
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FOREST COVER IN MARYLAND IN ACRES COMPARED WITH ISSUED PRIVATE HOUSING BUILDING PERMITS BY YEAR



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Generalized Forest Types – Where are Maryland's Forests and What are They Made of?



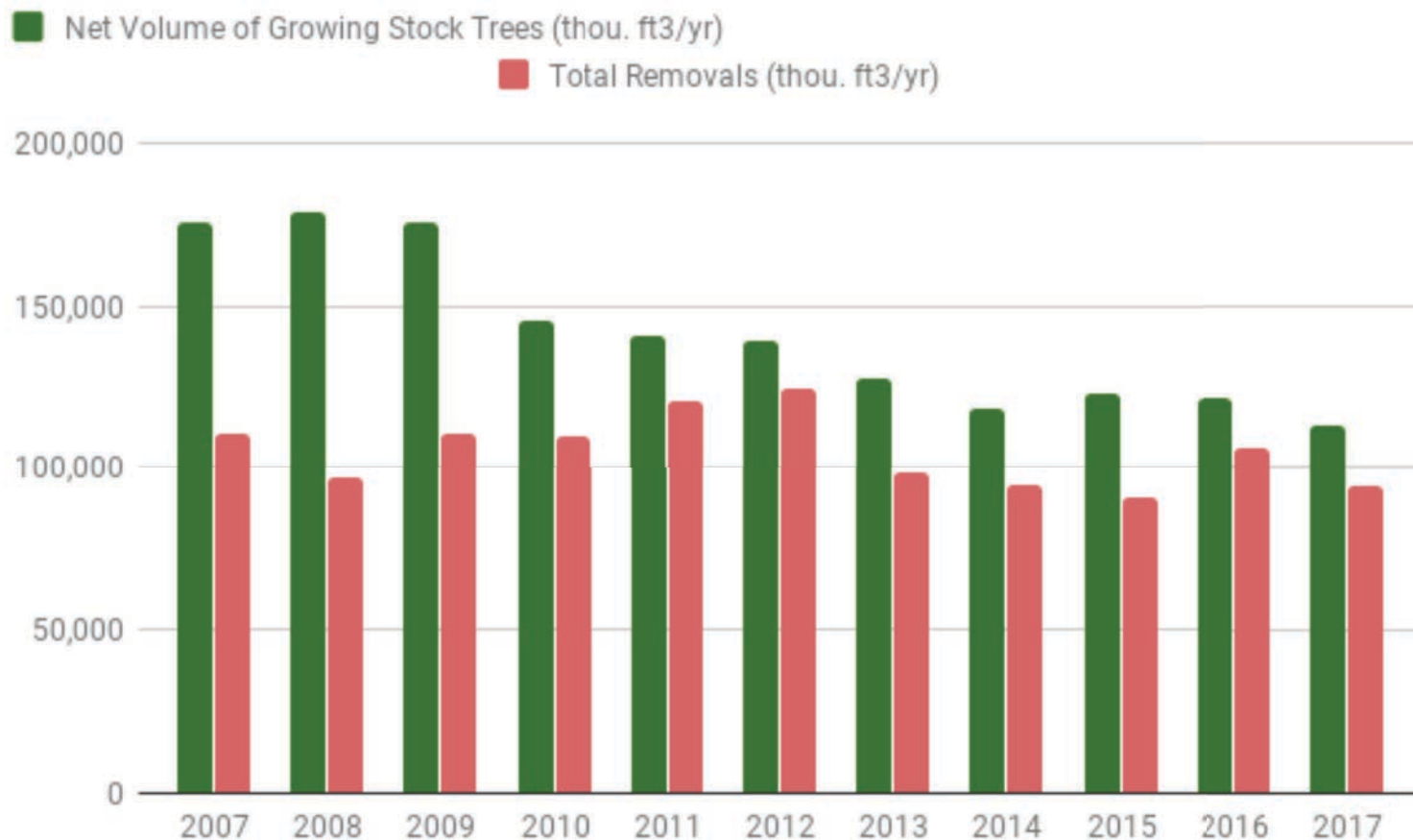
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- According to US Forest Service data, the area of timberland (forests not reserved from harvest) decreased 6% from its 1976 estimated size of 2.53 million acres to 2.37 million acres in 2008.
- By 2017, timberland had further decreased to 2.168 million acres, roughly 14% from 1976.
- Merchantable wood volume removal compared with net growth in Maryland has been on average 57% of the net annual average growth
- Increasing Volume- Average Annual Cubic Feet
 - Growth of 6.56 million cubic feet of merchantable wood on timberland (greater than or equal to 5 inch diameter at DBH)
 - Removal of 3.77 million cubic feet
- Young forests declining- Stands classified as sapling, seedling, and non-stocked
 - 1976- 20 percent of timberland
 - 1999- 12 percent
 - 2008- 9 percent



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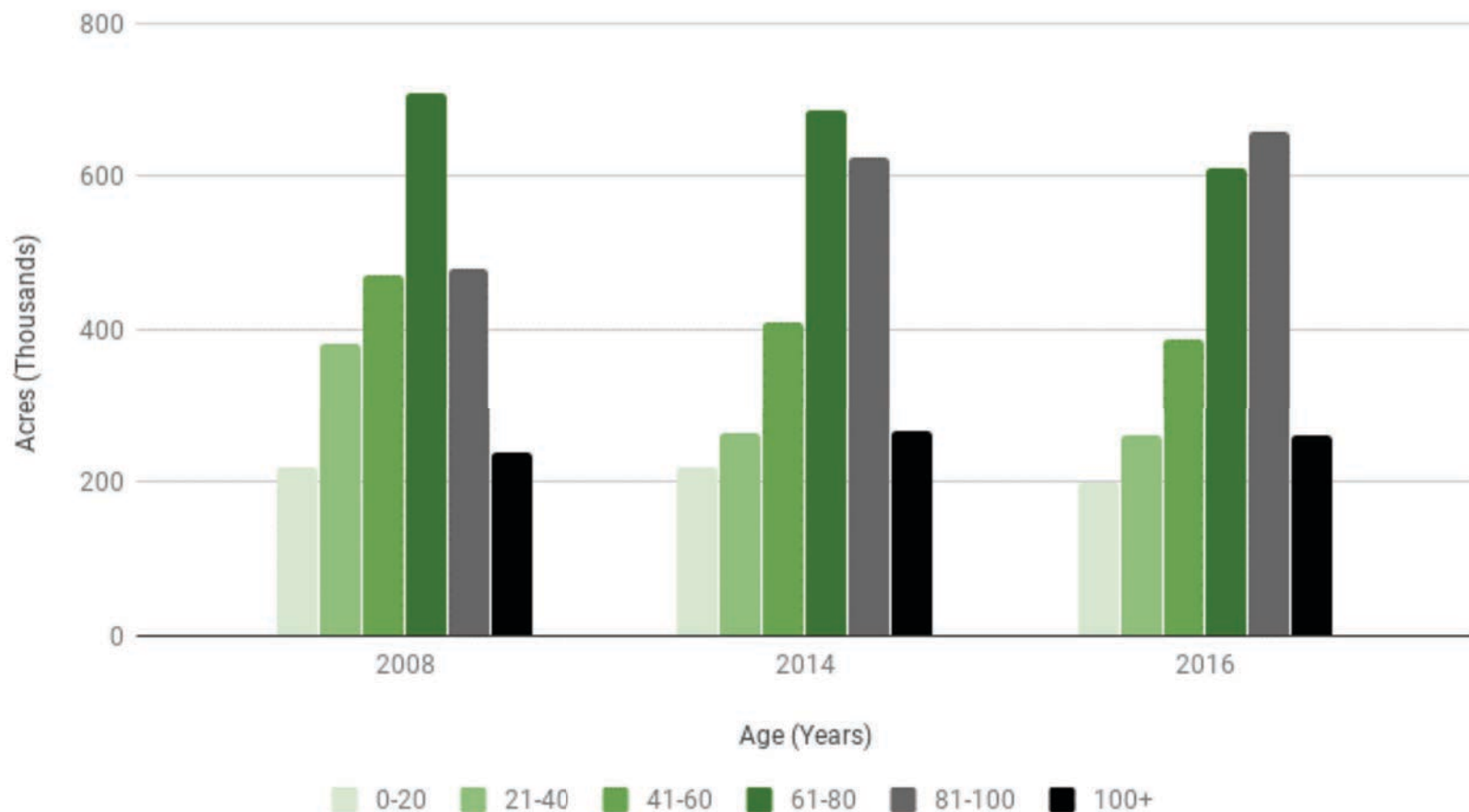
Growth exceeds removals, but natural mortality increasing



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...but growing older

FIGURE 3: FOREST AGE CLASSES BY SURVEY PERIOD

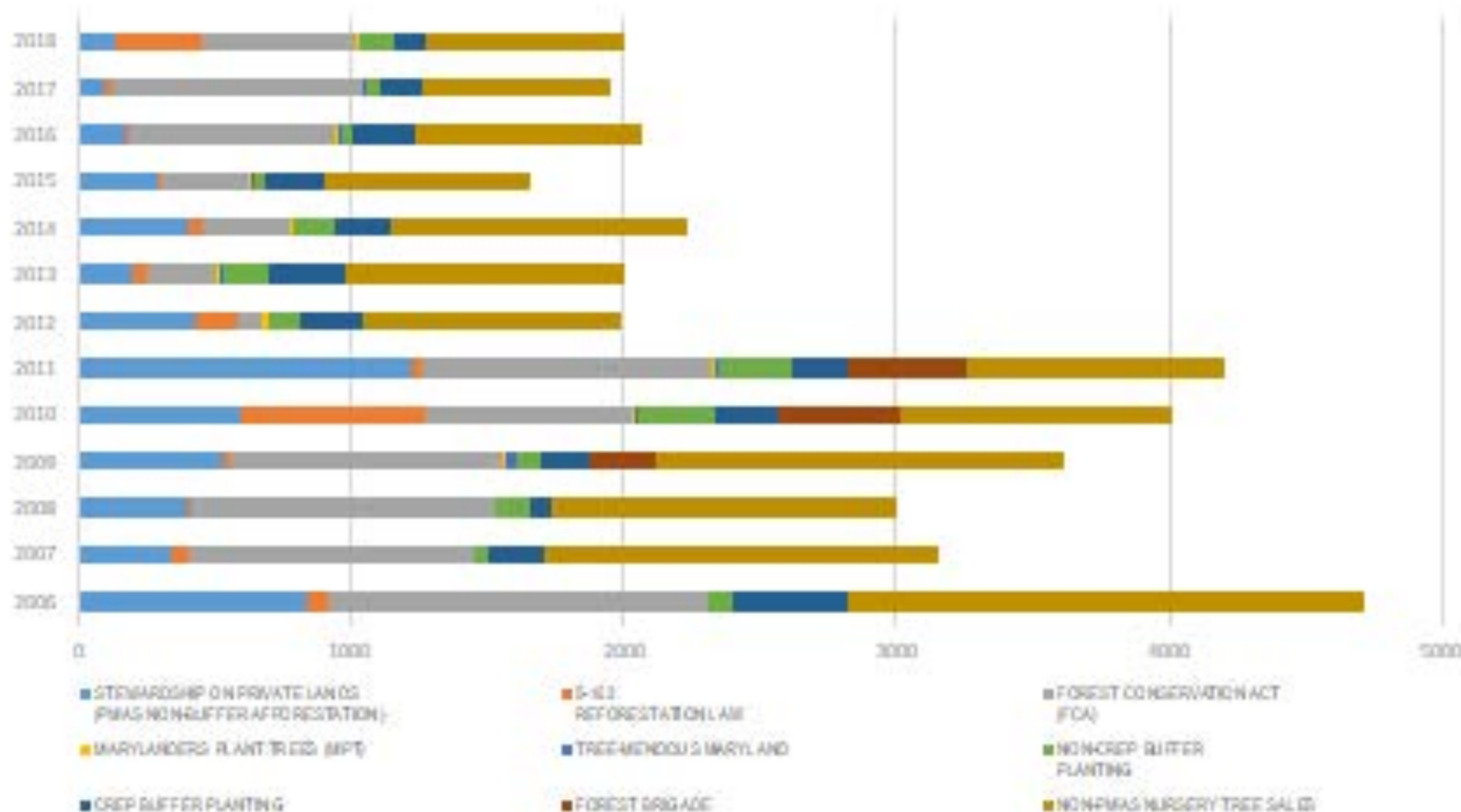




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Forest Service Tree Planting by Program (FY)



Updated legend and nursery seedling data



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Threats to Maryland's Forests



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Maryland's forests are threatened by...
development

- Maryland's population is expected to increase by over 10%, between 2020 and 2040, to nearly 6.9 million people



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Maryland's forests are threatened by... insects and diseases, invasive plants

Major pest and pathogens are:

- **Gypsy Moth** (5 acres defoliated in 2017)
- **Variable oakleaf caterpillars** (5,700 acres defoliated in 2017)
- **Ash rust** (defoliated 2,500 acres in 2017)
- **Southern pine beetle** (populations low, little damage, mostly near salt-stressed area)
- **Emerald ash borer** (Causing extensive ash mortality state-wide).
- **Thousand Cankers Disease** (tiny northeastern portion of Maryland is quarantined, just expanded to Balt. City and S. Balt. Co. Carrier —Walnut twig beetle).
- **Hemlock wooly Adelgid** (Actively being treated in Western MD and northern counties)
- **Beech Bark Disease** (150K acres infested in Garrett County)
- **Bacterial Leaf Scorch** (State-wide)
- **Saltwater Intrusion** (13,096 acres impacted)



Imminent Threats:

- **Sirex wood wasp** (Not present, but potential very damaging)
- **Spotted lanternfly** (detected in Cecil County, current infestation around Philadelphia)



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Maryland's forests are threatened by...
deer

“...abundance now poses threats to natural forest ecosystems and to other wildlife species” – Maryland Deer management Plan



Photo: Don Outen (Baltimore Co. DEPS)



- US Park Service study found that deer browse particularly altered the composition of bird species in forest stands, while altering the stands themselves.
- It concluded that, if unchecked, excessive, preferential deer browse would alter Oak-Hickory and Bottomland forest types by directing successional regeneration toward cherry/ask/hackberry dominated stands

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Maryland's forests are threatened by... **fire**

Wildfires are a common occurrence in Maryland. In an average year, the Maryland Forest Service responds to an average of 325 wildfires that burn more than 3,200 acres of forest, brush, and grasses. Fire departments respond to over 5,000 wildfire incidents per year.



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Maryland's forests are threatened by...

climate change

- Climate change has the potential to amplify other threats to the forest:
 - more favorable conditions for wildfire,
 - altering native plant communities,
 - more favorable conditions for invasive plants (vines!), insects, and diseases.
- Forests affected by
 - greater droughts
 - periods of extreme weather (e.g. ice/frost damaging in recent years)
 - Intense rainfall, flooding, root saturation





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Maryland's Forest Industry



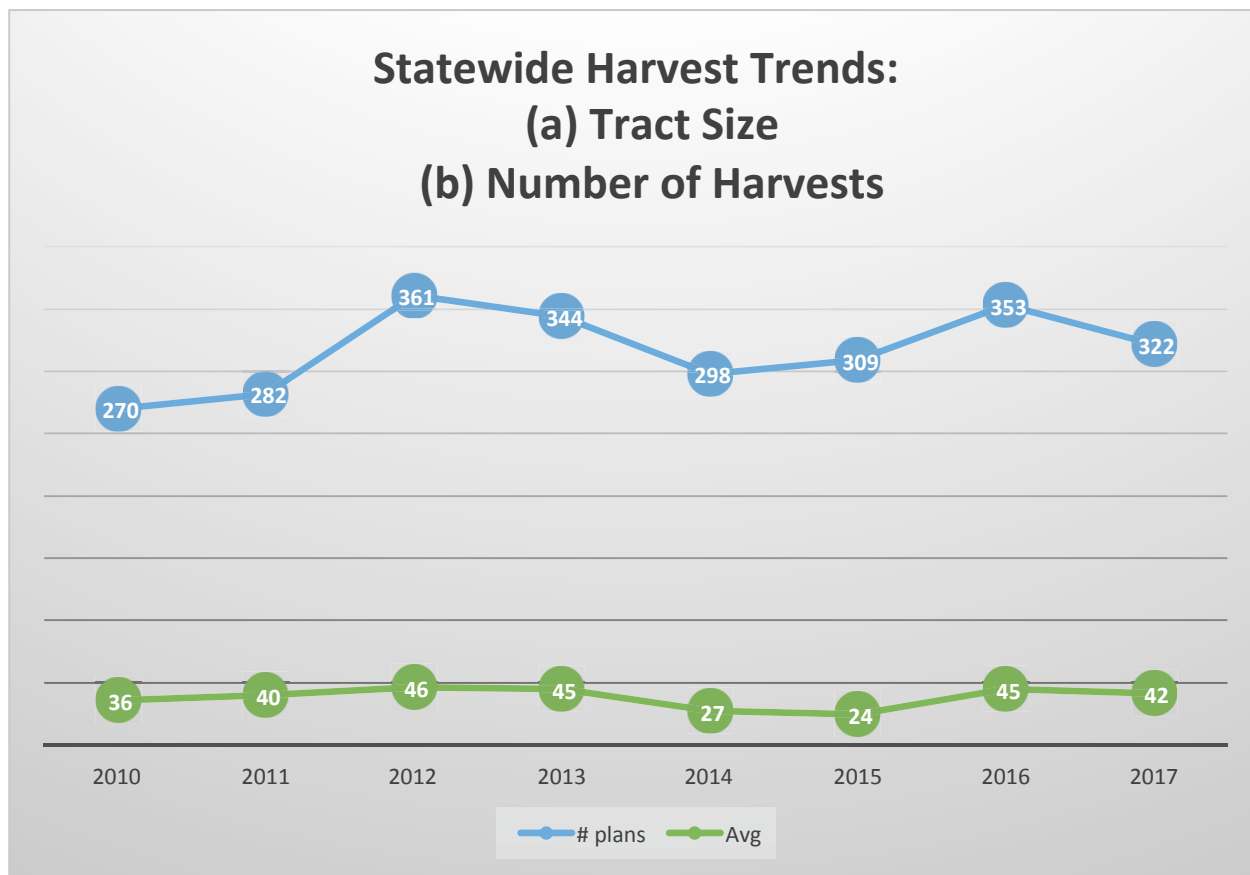
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Maryland Forest Product Industry Facts 2015- \$3.5 Billion industry in MD

1. Most Common Species Harvested
 - Red/White Oak
 - Poplar
 - Cherry
 - Maple
 - Pine
2. Products Sold in 2018
 - Lumber
 - Logs
 - Piling
 - Posts
 - Rail ties
 - Firewood
 - Mulch
3. Wood Consumption (Self-reported 2017)
 - 141 million board feet
 - 26 sawmills reported
 - Mills traveled no more than 75 miles to procure standing timber.

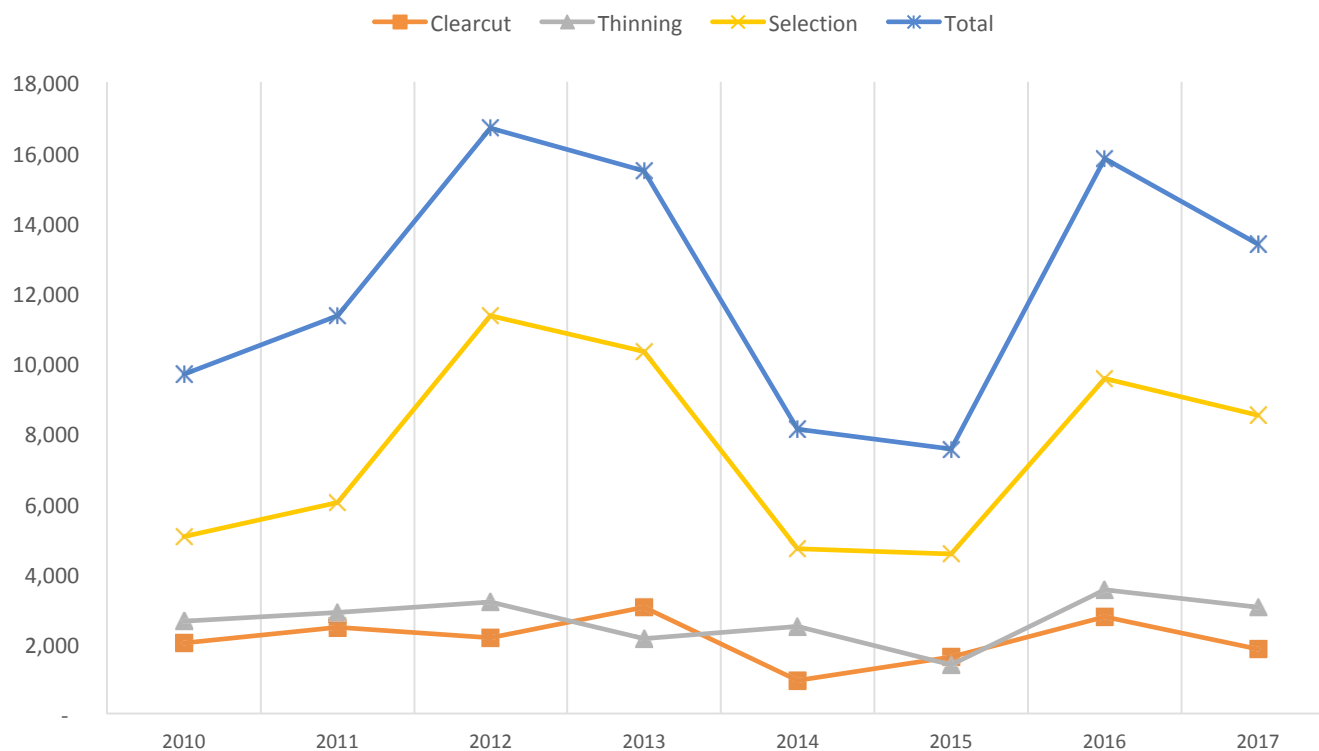


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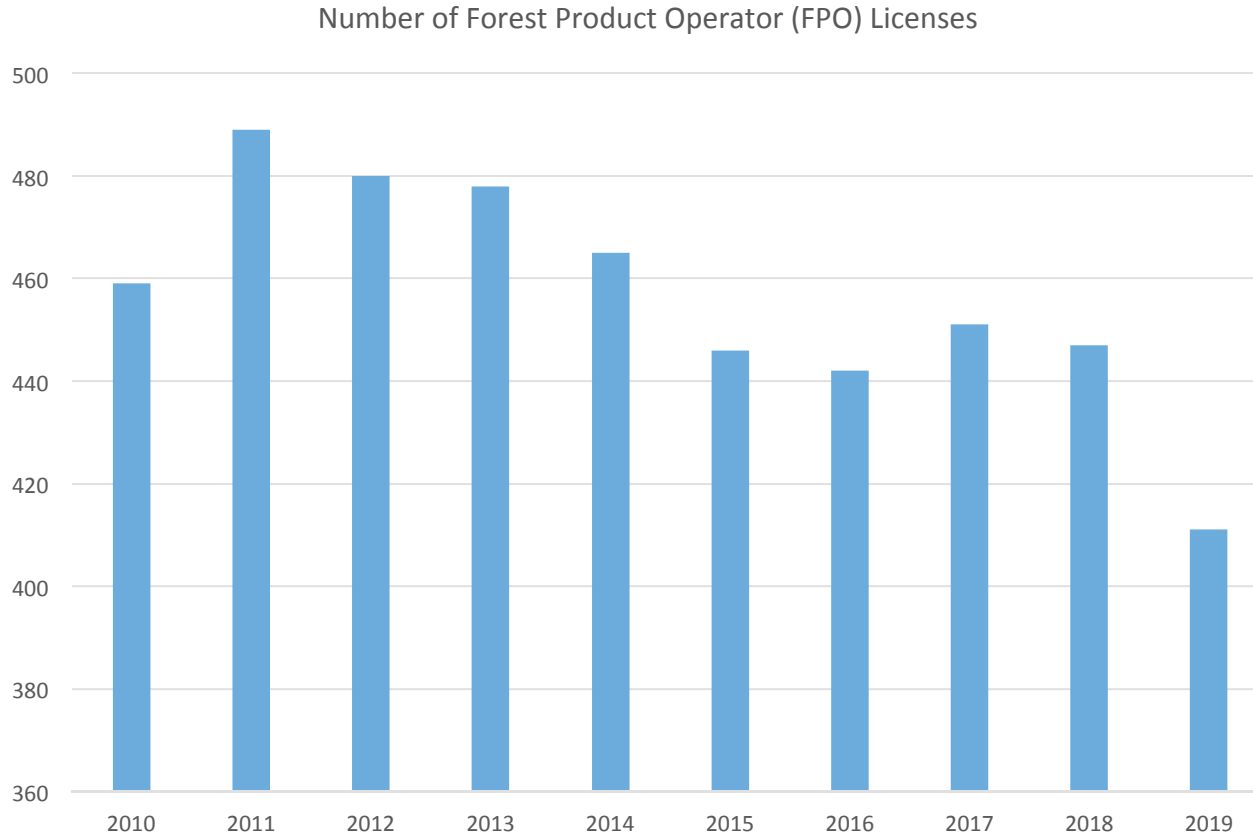
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STATEWIDE HARVEST TRENDS: ACRES HARVESTED BY METHOD





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Photo: Eric Reed

Forest Action Plan is not... A Cure-all

- Aging Forests
- Declining Markets
- Loss to Development

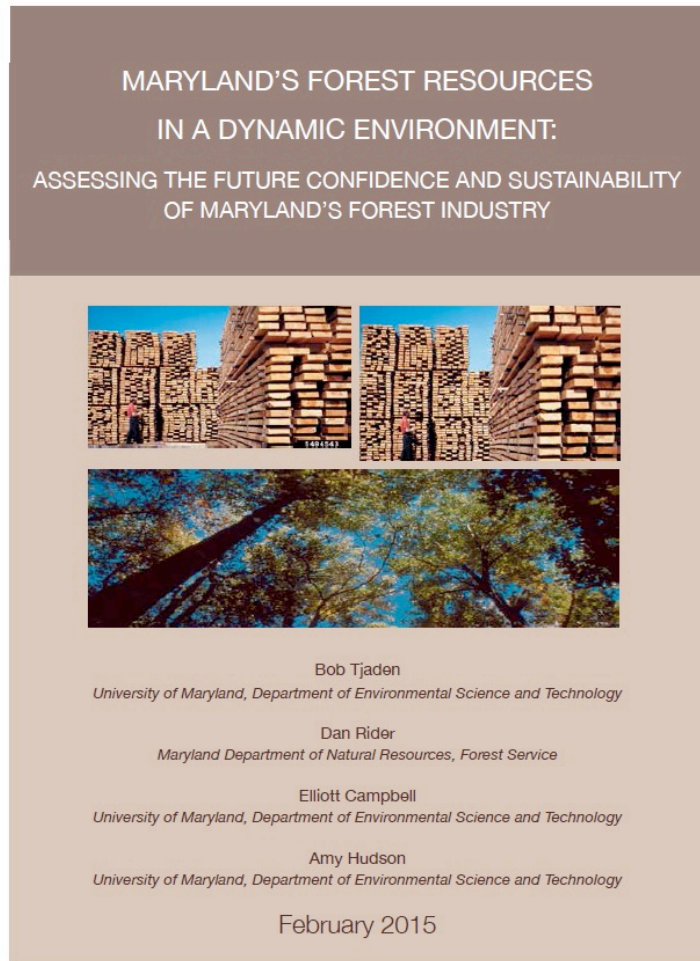


Forest Action Plan is... a Tool for Adaptive Management

- New Planting Programs
- New Forest Health DNR team to partner with MD Dept. Ag
- Revising Forest Harvest Permitting Process
- Better forest cover data
- Firewise Chipper Days
- Other...



Updates from New Information, Laws, and Data



- Forest Technical Study from 2019 SB729
- Forest Preservation Act of 2013
- 1-m Forest Cover
- UM Extension Future Confidence Survey
- New Wildlife Action Plan
 - BioNet
- New threats
 - Thousand Cankers Disease of walnut
 - Spotted Lanternfly

New Programs since 2010

- Urban
 - Lawn to Woodland
 - Arborist Training and Continuing Education Crediting Program
- Fire
 - Expanded Federal Excess property programs for wildfire control (DNR and Volunteer Fire Companies)
- Health
 - Expanded emerald ash borer response
 - Forest Health Team
- Stewardship
 - Healthy Forests, Healthy Waters- CB Trust Fund, ACB, & Forestry Bds
 - Landscape-scale plans in watersheds



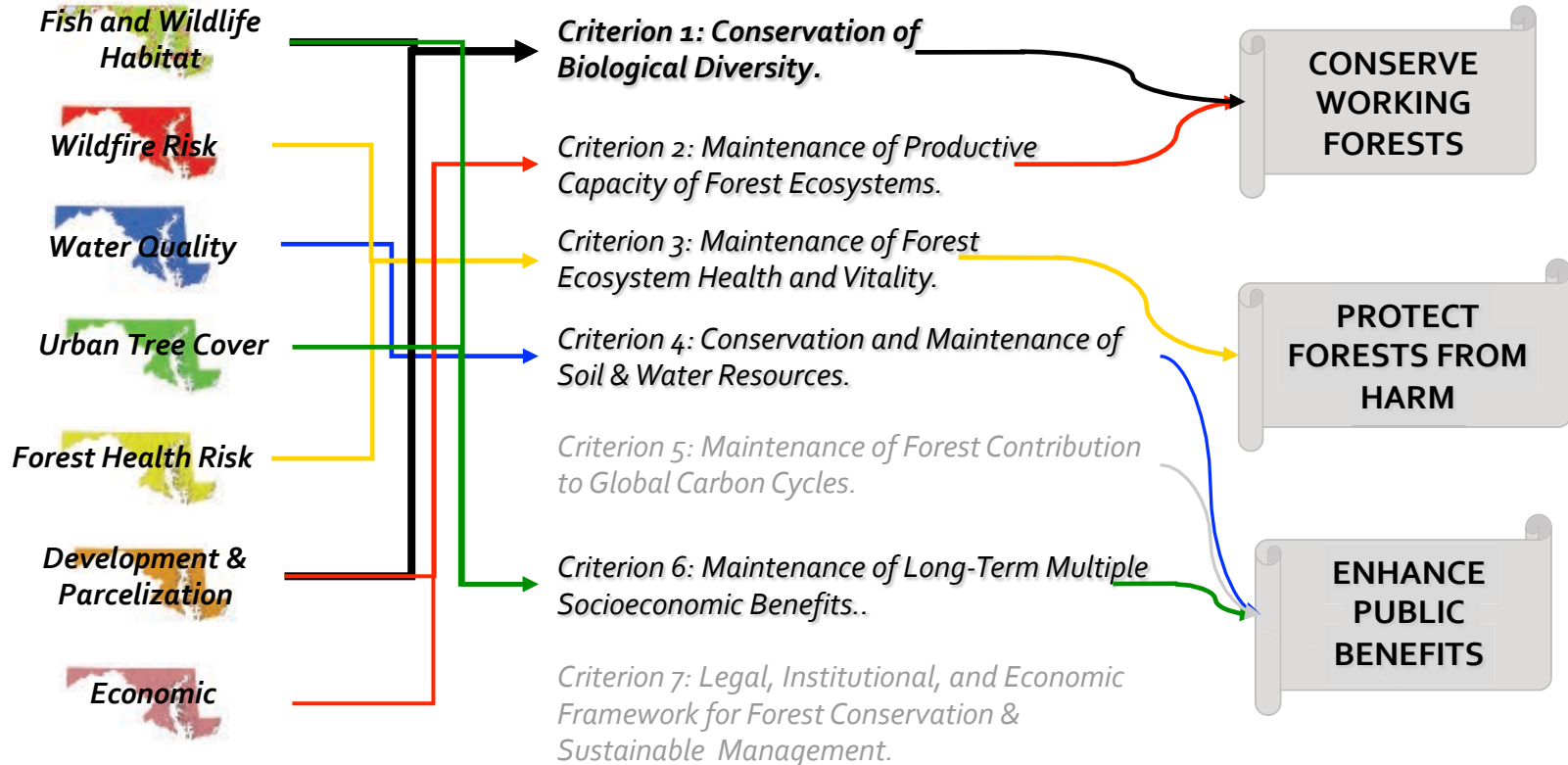
Forest Resource Assessment:

Relating Priority Areas with Sustainability Criteria and National Themes

NAASF CORE ISSUE PRIORITY
AREAS

FOREST CONDITIONS & TRENDS
CRITERION

USDA FOREST SERVICE
NATIONAL PRIORITY



Potential Priorities

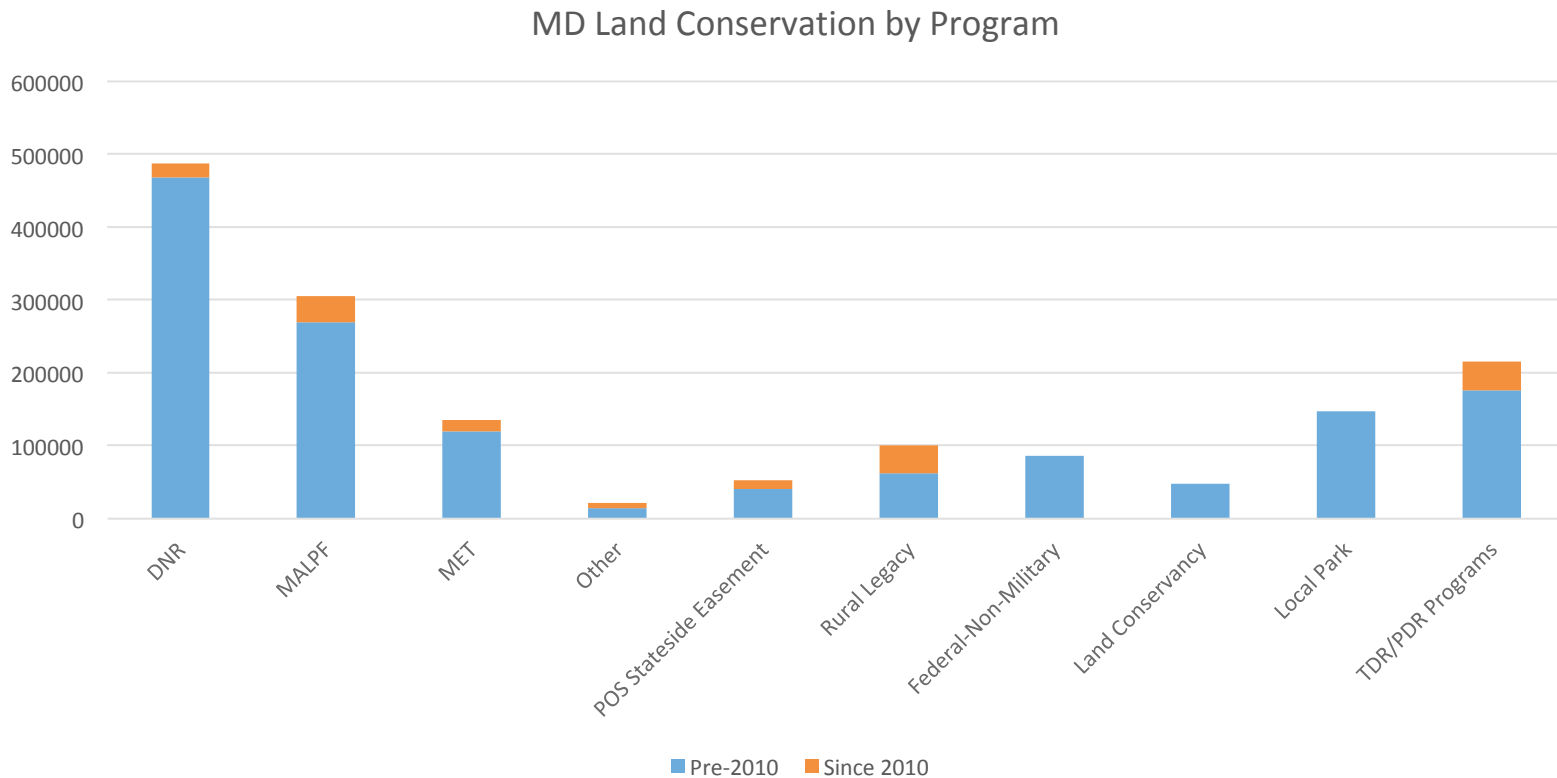
- Forest Conservation
towards no net loss of
forests
- Forest markets for
management
- Planning for climate
adaptation
- Expanded Urban
Forestry opportunities

Land Conservation Efforts

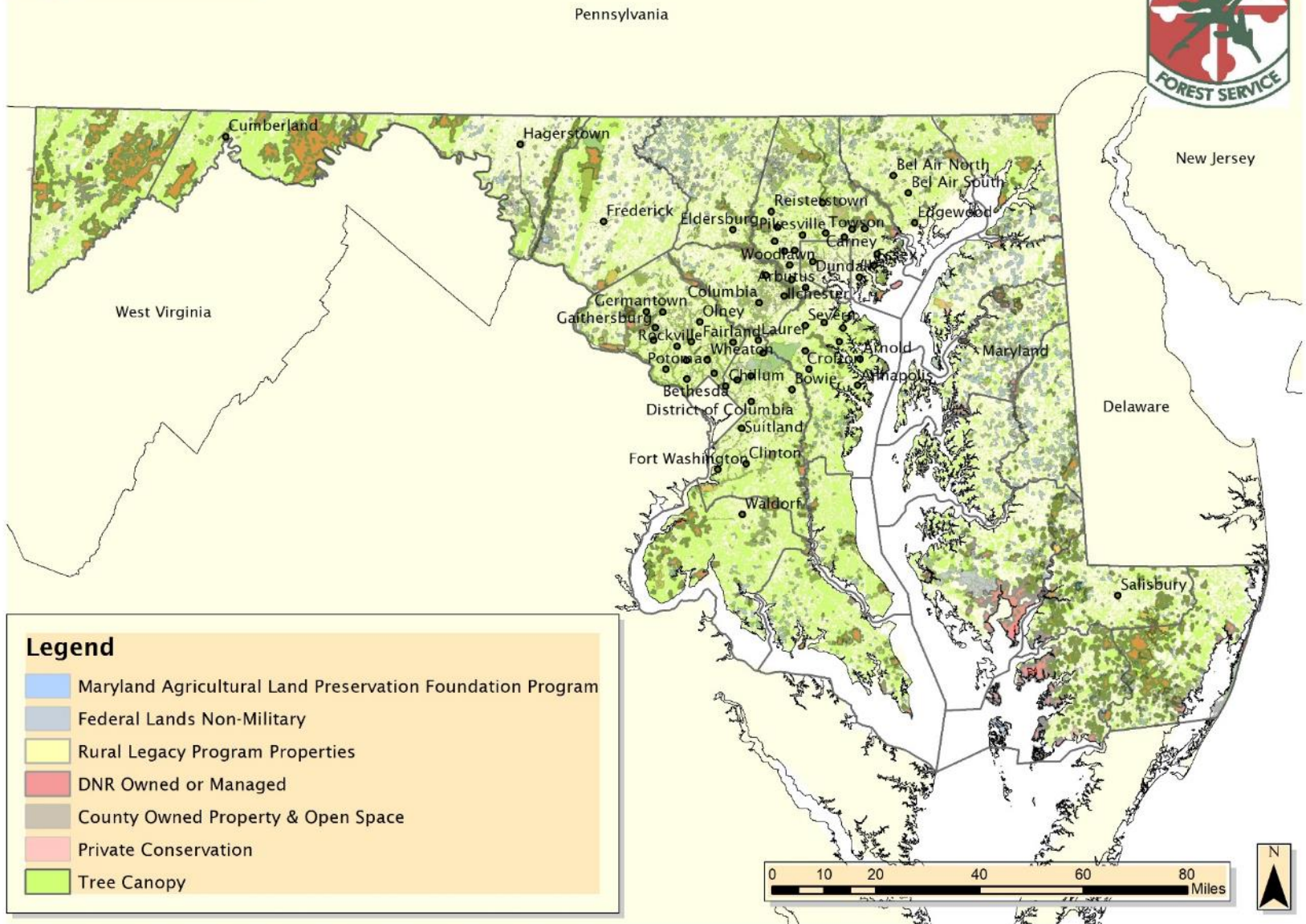
Total Conserved Lands 1.6 Million Acres (State, Local, Federal, NGO)

<http://dnrweb.dnr.state.md.us/gis/plreports/currenttotals.html>

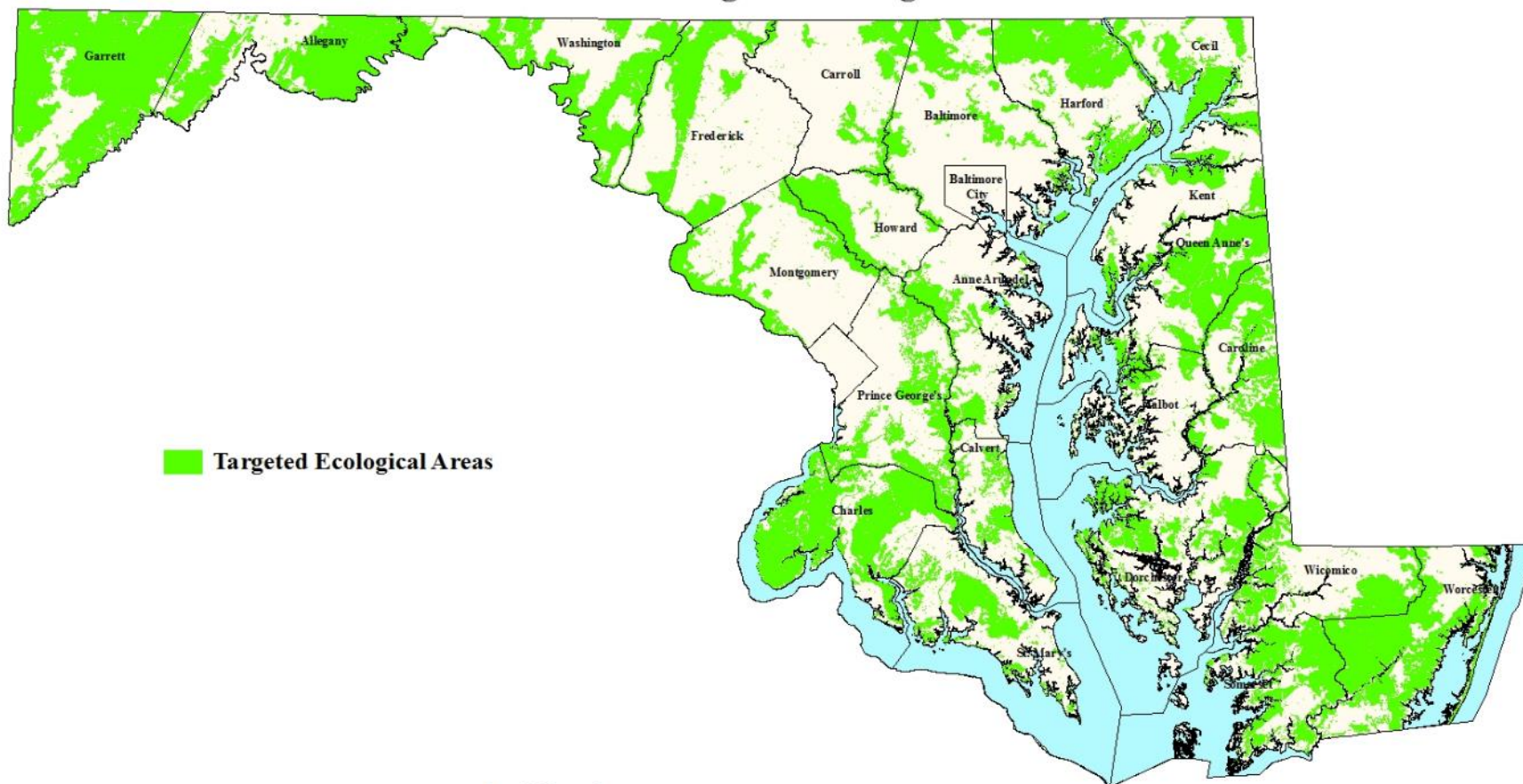
56% in forest for conserved land in State Programs



MD Protected Lands in Relation to Tree Canopy



POS Stateside - Targeted Ecological Areas



Maryland Department of Natural Resources
Geospatial Information & Analysis
580 Taylor Ave. E-2 Annapolis, MD 21401
410-260-8985 or 1-877-620-8DNR x8985
dnr.maryland.gov
DNR May 2017

Larry J. Hogan, Jr.
Governor
Boyd K. Rutherford
Lt. Governor
Mark J. Belton
Secretary



Markets for Forest Management

- Loss of Markets
 - Verso closing the Luke paper mill
 - Direct job and services loss
 - Loss of market for low-value wood needed to practice timber stand improvement
 - Port of Baltimore stopped fumigating logs for export
 - Natural gas is replacing wood fuel at Eastern Correction Institute (1/3 of the market for low grade wood)
 - Three of largest remaining sawmills closed in last 6 months
- Market Opportunities: Maryland is a national leader in preserving forests, but not forestry infrastructure.
 - Strategic Plan with Maryland Forests Association (MFA) and Association of Forest Industries (AFI)
 - Pursue wood as fuel, converting oil-heated buildings in need of furnace replacement with wood
 - State support
 - Hospitals, campuses, and larger buildings

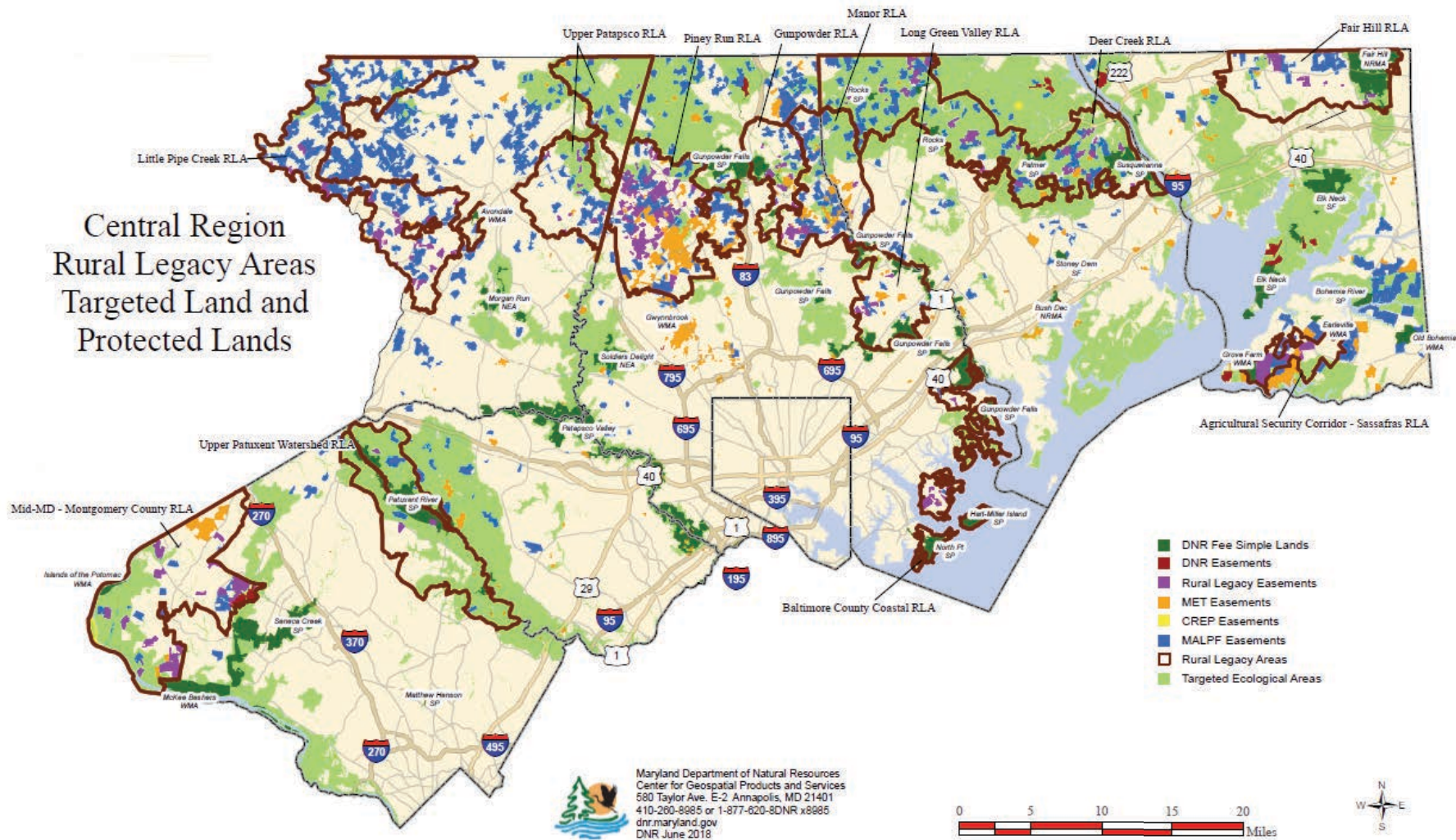


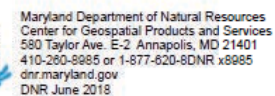
Southern Region Rural Legacy Areas Targeted Land and Protected Lands



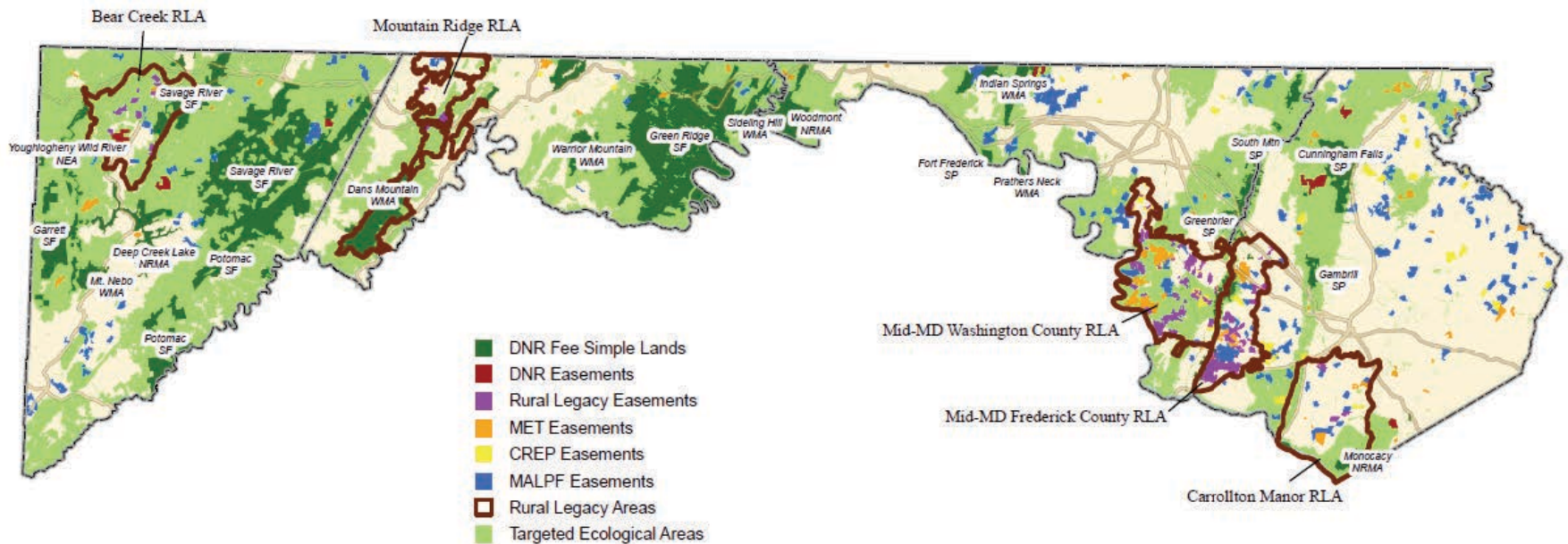
Maryland Department of Natural Resources
Center for Geospatial Products and Services
580 Taylor Ave. E-2 Annapolis, MD 21401
410-260-8985 or 1-877-620-8DNR x8985
dnr.maryland.gov
DNR June 2018

Central Region Rural Legacy Areas Targeted Land and Protected Lands





Western Region Rural Legacy Areas Targeted Land and Protected Lands



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dnr.maryland.gov
DNR June 2018



Regional Issues

Southern Region Forest Service

- Prepare 150 – 170 Forest Stewardship Plans/year on 6000 - 7000 acres
- Manage four State Forests 9000 acres (Doncaster, Salem, Cedarville, St. Inigoes) with 3-4 timber sales/year, trail improvement program & public hunting/access.
- Issue 75-90 Utility Permits for Roadside Tree trimming/year, 200-300 Individual RST permits
- Backyard Buffer programs expanded from Anne Arundel to include Calvert and Saint Mary's- 6600 trees; Next year Charles & Prince George's will be added.
- Healthy Forests, Healthy Waters- 25 acres 2018, 73 acres planned for 2019

Regional Issues

Eastern Region Forest Service Issues:

- Markets! We are growing it and conserving it, but will we use it? No Markets, No Forests!
- Continued Tree Planting, what's left to plant?
- Salty wood. How do we adapt to saltwater intrusion?



Talbot Co. 15 yr old cut

Regional Issues

Eastern Region Forest Service Stats:

- Average 123 Forest Stewardship Plans per year on 8,700 acres.
- Timber Stand Improvement on 71 properties per year on 3,300 acres.
- Planting Projects average 550 acres per year.
- Average 122 Timber harvests on 6,800 acres per year.
- Manage Chesapeake and Pocomoke State Forests sustainably. Over 90,000 acres.
- Average 100-200 acres of regeneration harvests. Average 1,000 acres of thinning each year.
- Somerset County 1st County on Shore to go for Tree City USA.
- Backyard Buffers expanded to all Eastern Shore Counties.

Regional Issues: Western Region

- Invasive species, deer, and loss of forests are issues in Western MD as in other regions.
- The Verso closure will have dramatic short and long term consequences to our regional workforce and economy, along with everyone's ability to adequately manage our forests and related natural resources.
- We cannot adequately or effectively manage our forests without markets.
- The pulpwood market is the main outlet for thinning, timber stand improvement, and other early and mid-forest management practices
 - improves tree vigor
 - supports sawtimber production and higher value markets
- MD Forest Service
 - Manages ~125,000 acres in Western Maryland on three State Forest complexes - Green Ridge in Allegany County, and Savage River and Potomac-Garrett in Garrett County.
 - Assists 2000+ private forest landowners in managing another ~70,000 acres.
- The mill closure will impact the management of those acres in MD and others in surrounding states.



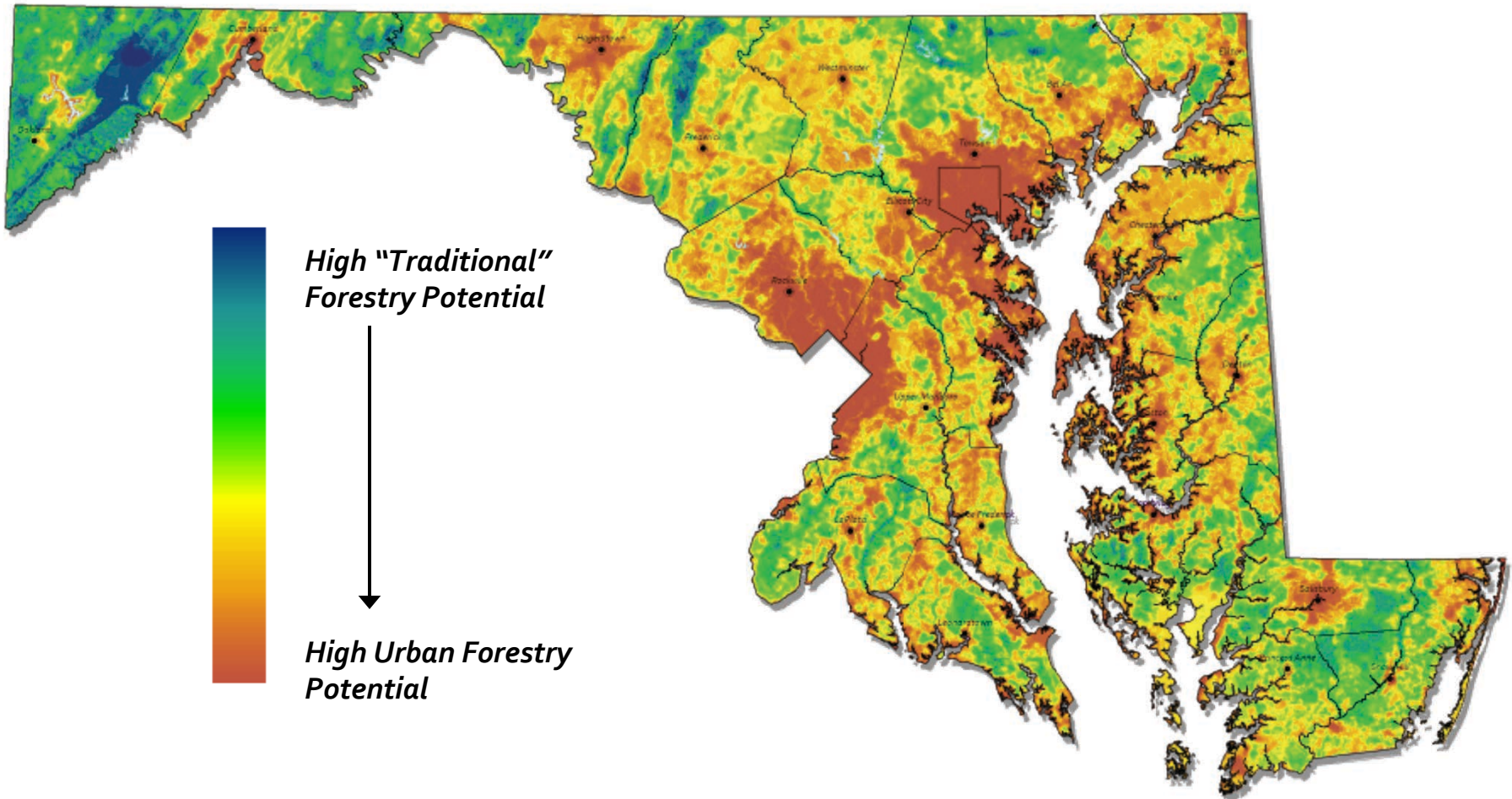
Regional Issues: Central Region

- High development pressure, abundant invasive species, and high deer browse pressure are significant stressors to the forests.
- Central Region has a variety of sawmills, mostly small mills, but important for capturing wood value from urban and rural forests.



- MD Forest Service
 - Assists 100+ private forest landowners annually on 3-4,000 acres
 - Assisted 6,000 acres of Certified Tree Farms in 2018
 - Planted over 10 miles of forest buffers in 2018
 - Planted over 150 acres of trees in 2018, including buffers

Composite Priority Areas of Maryland's Forests



Summary: Maryland Forest Action Plan Goals

- I. Restore and Sustain Forest Landscapes
- II. Ensure Healthy and Resilient Forests
- III. Ensure Clean and Abundant Water
- IV. Create Jobs and Sustainable Communities
- V. Make Landscapes More Resilient to Climate Change

What has worked well?

What should change?

What is a priority area to you?

Urban/Community?

Rural?



Harvests after 2 and 15 yrs