NASA's Carbon Monitoring System & USDA Forest Service
2016 Applications Workshop & Tutorial:
"LiDAR and CMS Applications, Uses & Lessons Learned in the Tri-State Area
Of Maryland, Delaware and Pennsylvania"
USDA Forest Service Northern Research Station, Main Conference Room
Newtown Square, Pennsylvania
Friday, September 9, 2016

A NASA Carbon Monitoring System (CMS) and USDA Forest Service collaboration.

Goals of the CMS/USFS Applications Workshop & Tutorial:
Discuss the benefits of LiDAR and the CMS data products available for the tri-state area end users, and assess results and lessons learned from the agencies and organizations using the data.

- *Understanding of stakeholders needs for carbon monitoring and measurement, reporting and verification (MRV)*
- *Demonstration of new NASA-Carbon Monitoring System capabilities*
- *Identify opportunities and challenges and next steps for application of new technology*
- *Provide data access and use tutorial*
- *Identify the challenges/needs of communities that are interested in biomass, Lidar applications, MRV and related activities.*

Expected Workshop Outcome:

- *Provide opportunity for communication and collaboration with the CMS Project*
- *Develop a Tri-State Working Group for quarterly updates on state needs and CMS product updates*
- *Expose state and county stakeholders from the Tri-State area on how to use CMS data products, and on the value, applications and uses of LiDAR data.*
- *Discuss lessons learned from end users on the diverse applications and uses of LiDAR data and CMS data products.*
- *Feedback and guidance on how agencies can use and apply CMS data products to achieve the goals of state climate action plans.*
- *Identify policies and opportunities for supporting Forest Carbon MRV with CMS efforts.*

Friday, September 9, 2016		
9:00am	***Registration & Coffee***	
9:30am	Richard Birdsey, *USDA Forest Service and NASA CMS Collaborator*	Welcome to the Meeting
9:35am	George Hurtt, *CMS PI & Science Team Leader, University of Maryland*	Welcome to NASA CMS & targeted focus on Tri State CMS Science
9:55am	Vanessa Escobar, *CMS Applications Coordinator, NASA GSFC*	CMS Applications perspective and expectations for the Tri State region
10:15am	Expectation Settings and Initial Questions	
	Speaker(s)	**Topic**
10:30am	Gregory Czarnecki, *Climate Change & Research Coordinator, Pennsylvania DCNR*	PA Climate Change Action Plan: Requirements, activities and policies related to forest carbon monitoring and MRV
10:45am	Shawn Lehman, *Section Chief Inventory & Monitoring Section, Pennsylvania DCNR Bureau of Forestry*	CMS for Carbon Monitoring Needs: Current approach to forest carbon MRV in the state of Pennsylvania
11:00am	Panel Discussion-Addressing the needs of PA with CMS solutions.	

11:15am	Morning Break (Coffee & Refreshments)	
11:30am	Susan Love, *Climate & Sustainability Section Lead, Delaware DNREC*	The Climate Framework for Delaware: Requirements, activities and policies related to forest carbon monitoring and MRV
11:45am	Kari St. Laurent, *Delaware National Estuarine Research Reserve*	CMS for Wetland Carbon Monitoring and Assessment in the state of Delaware
12:00pm	Panel Discussion-Addressing the needs of DE with CMS solutions.	
12:15pm	Lunch (On your own)	
1:30pm	Elliot Campbell, *Maryland Department of Natural Resources*	MD Greenhouse Gas Emissions Reduction Act: Requirements, activities and policies related to forest carbon monitoring and MRV
1:45pm	Rob Feldt, *Maryland Forest Service*	CMS Lessons Learned from using LiDAR and CMS products for Forest Planning and Management in the state of Maryland
2:00pm	Panel Discussion-Addressing the needs of MD with CMS solutions.	
Added value to using CMS Data-the extended benefits of Lidar		
2:15pm	John Brodnicki, *Geospatial Application Section, Pennsylvania DCNR Bureau of Forestry*	LiDAR Derived Topographic Wetness Index for the state of Pennsylvania
2:30pm	Naomi Bates, *Delaware Geological Survey*	LiDAR-Based Sea Level Rise Mapping for the state of Delaware
2:45pm	Kristofer Johnson, *USDA Forest Service Northern Research Station*	LiDAR Applications for Fine Tuning Forest Inventory Estimates in the Nonforest and Understory Carbon Pools
3:00pm	**Synthesis Panel**	
3:15pm	*Afternoon Break* (Coffee & Refreshments)	
3:30pm	Jarlath O'Neil-Dunne, *Spatial Analysis Laboratory, University of Vermont* and Katelyn Dolan, *University of Maryland*	**CMS Tutorial**: Working with high-resolution land cover data {hands-on presentation of using CMS biomass products}
4:30pm	Follow-Up Q & A for CMS Tutorial	
4:45pm	George Hurtt & Vanessa Escobar	Summary of actions closing remarks.
5:00pm	***CMS Applications Meeting Adjourn***	