

perhaps even timber sale administration.

This is a one-day workshop including classroom time and field demonstrations designed to introduce natural resource managers to potential applications of UAS in their forest and land management work.

New workshop format

This workshop includes a reconfigured agenda designed to allow participants greater flexibility. The **morning session** will include an overview of different UAS system types (including fixed-wing vs. quadcopter-style systems), a discussion of potential natural resource applications, and weather permitting, a demonstration flight. The **optional afternoon session** will review capabilities to analyze data collected by a common (and typical) fixed-wing mapping "drone." While most of us are familiar with UAS' ability to capture video and photos, natural resource managers may be interested in the quite powerful data analysis capabilities as well, many of which are comparable to LiDAR data analysis methods and outputs.

Date: Tuesday, April 12, 2016

Times: UAS overview and demonstration: 8:15am – noon. Optional data processing session: 12:45-4:00pm.

Location: Cloquet Forestry Center, 175 University Rd, Cloquet MN 55720

Instructor: Bill Anderson, UMN

Cost: Morning only: \$75 SFEC members, \$140 others, \$40 students.

Full day: \$125 SFEC members, \$225 others, \$70 students.

CE Credits: 6.0 Cat 1-CF SAF

[Workshop agenda \(.pdf\)](#)

Resources shared during the April workshop:

- [Quick Terrain Reader – Getting Started Guide](#) (PDF downloaded April 2016) or [more support resources from Applied Imagery](#).
- [Photoscan 1.2 ortho DEM tutorial](#) (PDF downloaded April 2016) or [more support resources from Agisoft](#).

Photos:



If you missed it, here's the recording:
sfec.cfans.umn.edu/2022-webinar-s...



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UMN SF... @MNFore... · Sep 20

Starting in 15 minutes: Adaptive
Silviculture for Climate Change

AGENDA

Natural Resource Applications of Unmanned Aerial Systems

April 12, 2016 from 8:15am to 4:00pm, Cloquet Forestry Center



8:00am	Check-in opens	
8:15am	<i>Welcome, introductions, and agenda review</i>	Eli Sagor, UMN-SFEC
8:30am	<i>Drones for Natural Resource Applications</i> -Fixed wing verses multirotor drones -Mission planning and legal limitations -Basic mission products -Post-processed product examples	Bill Anderson, UMN Forest Resources Dept.
9:45am	Break	
10:00am	<i>Demonstration flights</i> -Fixed wing eBee (weather permitting)	Bill Anderson
11:15pm	<i>Forestry applications</i> -Current applications -Conclusions and discussion	Eli Sagor and Bill Anderson
11:45am	Lunch break	CFC dining hall
12:30pm	<i>Post-flight data processing (optional afternoon session)</i> -Post flight processing -Overview of photogrammetric processing steps -Processing quality report	Bill Anderson
2:00pm	<i>Hands-on processing (Computer lab)</i> -Overview of processing software options -Processing raw data with PhotoScan Pro -Viewing LAS files in Quick Terrain Reader	Bill Anderson
4:00pm	Adjourn	