



# UAS Update

*Current Forest Service Perspective  
June 2015*

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# UAS Application Areas

- Resource Management
  - General remote sensing – hi res imagery, LiDAR and others....
  - Forest inventory
  - Resource mapping (fuels, forest health, etc.)
  - Rangeland Monitoring (grazing permits)
  - Engineering (bridge and dam inspections)
- Wildfire
  - Near real-time, high resolution fire detection and characterization
  - Tactical scale imagery and geospatial mapping/visualization products
  - Communications link/relay
- Law Enforcement & Investigations
  - Surveillance
  - Detection/mapping of illegal activities

# Two Track Approach to Evaluating UAS

## Large Platforms



## Small Platforms



# Points to Consider

- UAS promises to augment manned aircraft capacity.
- The mission objective and data requirements should guide selection of appropriate platform and sensors.
- UAS-derived data and intelligence may increase the safety and effectiveness of field personnel.
- The Forest Service UAS Advisory Group is developing agency UAS guidelines for appropriate use.
- We are working with our sister agencies to share knowledge and expertise as the technology and policy evolves.

# 2015

## Activities & Issues

- Presidential Memo on UAS use (Feb 2015)
  - Lays out federal agency responsibilities for use including safeguarding privacy, civil rights, and civil liberties in domestic use of UAS.
- Chief's Letter on UAS use (March 2015)
  - Forest Service policy states that unmanned aircraft will be considered the same as manned aircraft and follow the same policy.
  - Since UAS are "Aircraft Systems," **the responsibility for UAS in the Forest Service is the Aviation division within Fire and Aviation Management in State and Private Forestry.**
  - Acquisition of any UAS will follow existing Forest Service policy.
  - Establishes Forest Service UAS Executive Steering Committee (ESC). The initial tasking of the committee will be to coordinate efforts with our State and Federal partners and to develop additional Forest Service Policy on the operation and use of UAS, to include recreational use or any other use on National Forest System lands.

# 2015

## Activities & Issues - Continued

- UAS Advisory Group – established 2012
  - Communications Plan, internal & external websites
  - Evaluating utility and cost for Forest Service applications
- Public use of UAS on Forest Service lands – Policy in discussion
  - All lands vs. Wilderness areas
- Privacy and Surveillance
  - Significant public concern at this time

# Can I Fly?

Administrative documents (required for missions):

1. COA - FAA requirement
2. PASP - FS requirement
3. Official letter endorsing the project from Reg. Aviation Officer

Other helpful auxiliary documents:

- Letter from Chief “Unmanned Aircraft Systems” March 26, 2015
- Briefing paper
- User Needs Assessment

COA = Certificate of Authorization (issued by FAA)

PASP = Project Aviation Safety Plan



# Service yes – own/operate no?

## MAPPS Nixes Government Competition in UAV

*MAPPS website: Thursday, February 12, 2015*

“Recently, a U.S. Army Corps of Engineers (USACE) district office issued a notice in Federal Business Opportunities (fedbizopps) proposing to purchase a UAV (Solicitation W9126G-15-S-0007).

MAPPS staff contacted the responsible USACE officials and noted that prior to purchasing any aircraft, a Federal agency is required to comply with Office of Management and Budget (OMB) Circular A-126 (section 6.b.).

That Circular says before the Government acquires aircraft, it must comply with OMB Circular A-76 to assure that the private sector cannot provide Government aircraft or related aviation services more cost-effectively than the Government. (see particularly the Circular's Revised Supplemental Handbook's Appendix 6, Aviation Competitions). This aircraft cost-comparison requirement is also in Federal management regulations 41 CFR 102-33.80 and the Federal Acquisition Regulation (FAR) 48 CFR 7.3 Contractor Versus Government Performance.

**USACE did not follow these rules. Upon receiving the MAPPS inquiry, a review was conducted, and as a result, the procurement has been canceled.”**

# Service yes – own/operate no?

## MAPPS Nixes Government Competition in UAV

*MAPPS website: Thursday, February 12, 2015*

**A knowledgeable government employee responds:** “I don't think the MAPPS companies are quite ready to provide the services we need. I've had a call into Woolpert for several weeks about their capabilities (how much they charge, what types of sensors do they have, what kind of products do they produce, at what accuracies,....)” -- Anonymous

# Manned (MAS) vs. Unmanned (UAS)

".... the accuracy and spatial resolution of UAS-collected data is comparable to geodata from MASs. MASs are well suited to capturing large areas with metric cameras which may weigh up to 100 kilograms for high-accuracy mapping. In contrast, the use of UASs is appropriate when small areas have to be captured with high accuracy, high detail and in three dimensions using lightweight sensors. "

-- Mathias Lemmens, senior editor, GIM International

# Meet Lily



# Meet Lily

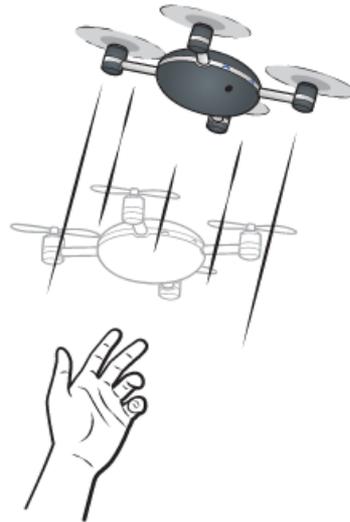
## Easy as 1, 2, 3.

No setup required. Just throw Lily in the air to start a new video.

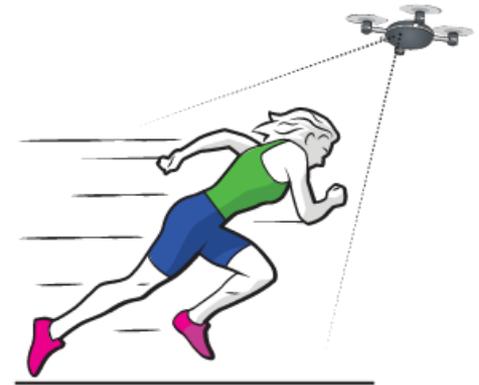
It's that simple.



Ready.



Throw.



Go!

