



United States Department of Agriculture



Integration of UAS into the Forest Service



Forest Service

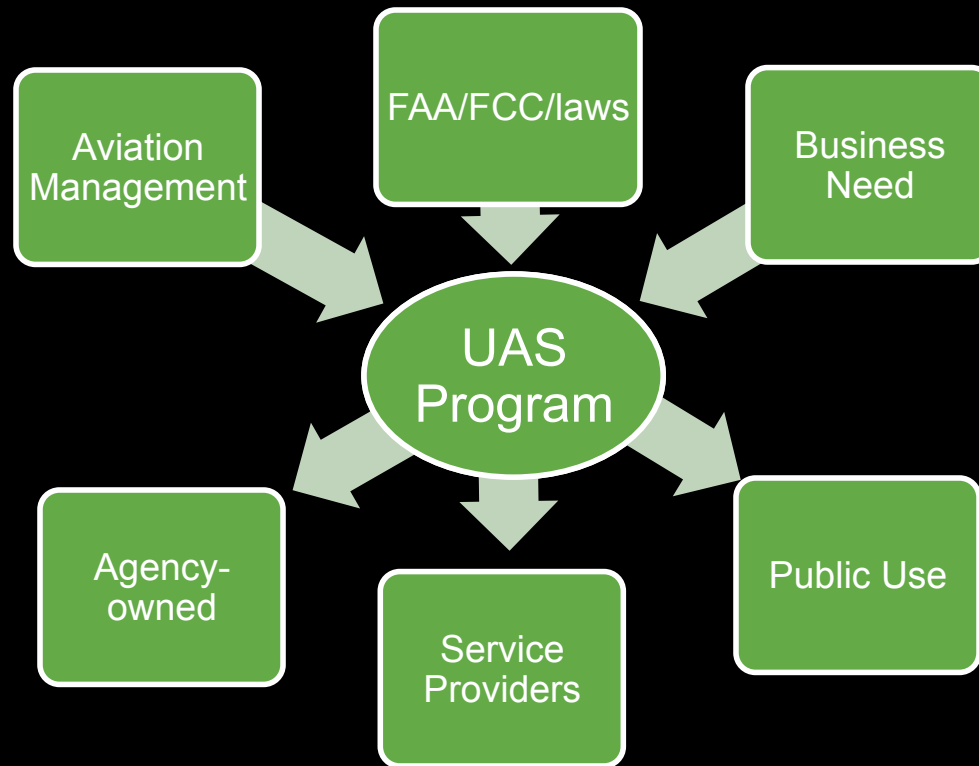
United States Department of Agriculture, Forest Service

Presentation Topics

- Overview of FS UAS governance
- Recent UAS activities
- Current work and program support
- Vision and next steps



FS UAS Program Organization



FS UAS Program Organization

UAS Advisory Group *-FS Staff Areas*

- Technical expert and user community representation
- Facilitates communications and application development

UAS Executive Steering Committee *-WO Staff/Directors*

- Chief-level direction
- Provide broad policy recommendations

UAS Program Manager *-WO F&AM Staff*

- UASAG Chair
- Responsibility to enforce FSM
- Authority over communication tools

Interagency Fire UAS Subcommittee *-NWCG Members*

- Qualifications
- Resource typing, ordering
- USFS Representation



Direction and Guidance - Highlights

- Public UAS Use:
 - FAA maintains authority over all civil airspace
 - FAR 101, PL 112-95 provides right to fly for hobby or recreational use
 - “In accordance with a community-based set of safety guidelines...” (use must be defined by a nationwide community-based organization)
 - FAR 107 provides avenue for professional use by the public in coordination with land management (can also cover hobby/recreational use)
 - Special designations (Wilderness, TFRs) include restrictions

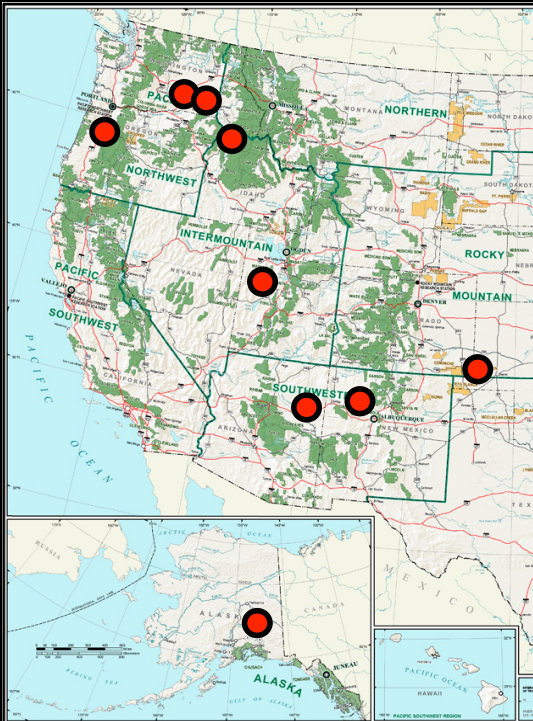


Direction and Guidance - Highlights

- Agency UAS Use:
 - Policies must ensure UAS are “used appropriately to further our mission with public safety, privacy, and civil rights safeguarded” – [Chief’s Letter July 2016](#)
 - Follow Aviation planning process for all flight activities
 - [RAO/UAS PM coordination, PASP, Operations Plan](#)
 - Privacy and PII must be addressed when conducting missions and handling imagery and data (assume all collected data contains it) – [PM 2015-Feb-15](#)
 - [Additional USDA direction may be forthcoming](#)
 - Acquisition: All UAS are aircraft, must be acquired IAW Aviation, Acquisition regulations (centralized acquisition and property management)
 - End-product contracts not centralized – follow Acquisition guidance



Examples of Recent FS sUAS Projects



1. Placer River Trail Bridge Inspection / Chugach NF (June 2015)
2. North Fire Support / Cibola NF (June 2016)
3. FHP/FM Aerial Survey / Apache-Sitgreaves NF (September 2016)
4. Eurasian Milfoil Mapping / Fishlake NF (September 2016)
5. Blackjack/Bluebird Mine Aerial Survey / Umatilla NF (October 2016)
6. Riparian Monitoring Survey / Wallowa-Whitman NF (June 2017)
7. Champion Mine Aerial Survey / Umpqua NF (August 2017)
8. Pioneer Post-Fire Aerial Survey / Boise NF (July 2017)
9. Dinosaur footprint mapping / Comanche NG (November 2017 & May 2018)



What are the Currently Available Methods to Use UAS on NFS Lands?

- **End Product Contracts** - Focus is on the data needed. UAS cannot be specified, but could be used to meet contract.
- **Contract for Flight Services** - Uses the same process and has the same timeframe as contracting for manned aircraft.
 - Additional contracting vehicles are currently being investigated, developed and implemented
 - NRCS UAS Services BPA
 - F&AM CWN contract
- **External Partners** - Utilize UAS flight services from other agencies, partners and cooperators.
 - Agreements required for all UAS flight services provided to the Forest Service.
 - Aircraft and pilots need to be carded appropriately for the mission.



Program Support

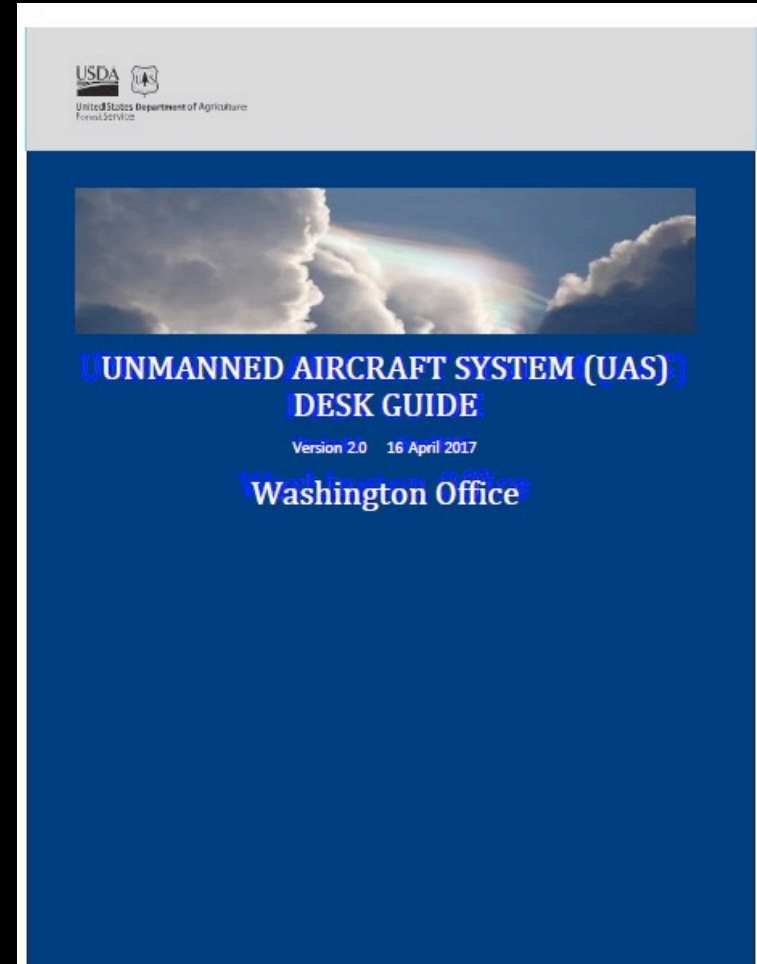
- For public use management: Public Affairs support, LE&I engagement, Rec and Wilderness
 - Ongoing coordination of policy and procedures
- Contracting UAS services: NIFC Incident Support Branch (ISB)
 - All UAS acquisition and contracted services under FS operational control are managed by ISB
 - UAS Program to develop standard language, desk guide to distribute to all contracting offices to ensure that end-product contracts do not become aircraft services



Outreach and Assistance



Public Awareness
Campaigns



UAS policy guidance and
reference materials for FS staff



Strategic Vision

- To foster safe, legal, respectful and enjoyable use of UAS for the public on National Forests
- To facilitate safe, efficient and cost-effective use of UAS for Forest Service work when UAS are the right tools for the job.



Next Steps

- Enhanced internal outreach/education
 - Agency-wide webinars
 - Improved Web presence
 - Summarize and split up guidance by application
- Establish a Program “toolkit”
 - Durable, flexible resource sharing agreements with partners
 - Contracts for services, equipment
 - Effective, available UAS training and mission request process



Next Steps

- Continuous Improvement
 - Baseline needs metrics from recent FS Needs Assessment survey
 - Plan to meet identified needs
 - Monitor performance through mandatory use reporting
 - Periodically reassess needs and adjust plan



Resources

- Internal FS UAS Website
 - <http://fsweb.wo.fs.fed.us/fire/fam/aviation/uas/index.htm>
- Public-facing UAS Website
 - <https://ems-team.usda.gov/sites/fs-uas-proj/SitePages/Home.aspx>



Questions?



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