Unmanned Aircraft Systems (UAS) Workshop
May 19-21, 2015

Dallas Peck Auditorium, USGS Headquarters, 12201 Sunrise Valley Drive, Reston, VA

Day 1 USGS UAS program: Tuesday, May 19

8:30-8:45 Welcome and logistics (Bruce Quirk, John Stock)

8:45-9:10 **David Applegate, Associate Director, Natural Hazards (USGS):** ***Welcome***

9:10-10:10 **Mark Bathrick, DOI Office of Aviation Services:**
How to develop and sustain a successful Unmanned Aircraft program for enhanced science, safety, and savings

10:10-10:30 Break

10:30-11:00 **Jeff Sloan (USGS):**
National UAS Project Office scientific research and applications overview, (landslides, natural hazards, thermal seeps)

11:10-11:30 **Leanne Hanson & Chris Holmquist-Johnson (USGS):**
Evaluation of the Raven, a small UAS for population estimates of Sandhill Cranes, detecting Greater Sage-grouse and mapping marsh breeding bird habitat

11:30-12:00 **Chris Holmquist-Johnson (USGS):**
Evaluation of TIR sensors

12:00-13:00 Lunch

13:00-13:30 **Jonathan Glen (USGS):**
Mapping and monitoring with adaptable, autonomous unmanned aerial systems

13:30-14:00 **Matt Bachmann (USGS):**
Measuring shrinking glaciers from airborne platforms

14:00-14:30 **Chris Sherwood (USGS):**
Unmanned aerial and sea-surface vehicles for mapping coastal change

14:30-14:50 Break

14:50-15:20 **Pete Chirico (USGS):**
Application of a small UAS for mapping and monitoring informal diamond mining in West Africa

15:20-15:50 **Mark Bauer (USGS):**
Processing UAS imagery using Agisoft Photoscan

15:50-16:20 **Terry Slonecker (USGS):**
The development of standards for compact imaging spectrometers

16:20-16:50 **Ryan Longhenry (USGS)**:
USGS UAS data management - opportunities and challenges

16:50-17:10 Wrap up and logistics (Bruce Quirk, John Stock)

Day 2 Federal UAS: Wednesday, May 20

8:15-8:30 **Everett Hinkley (USFS)**: *Welcome*

8:30-9:00 **Gordon Tribble (USGS)/Ryan Perroy (University of Hawaii):**
UAS applications in the Pacific Region

9:00-9:30 **Robert Dahlgren (NASA Ames):**
Customizing UAS platforms for the Federal mission: Volcano hazards example

9:30-9:45 Break

9:45-10:15 **Matt Bobo (BLM):**
Unmanned Aerial Systems in the BLM: Issues and applications

10:15-10:45 **JC Coffey (Cherokee Nation Technologies):**
Public private partnerships (P3) for UAS operations

10:45-11:15 **Kate Brodie (USACE):**
USACE coastal mapping sUAS research & development

11:15-11:45 **Matt Burgess (University of Florida):**
The University of Florida Unmanned Aircraft Systems research program: An update on selected natural resources applications and lessons learned

11:45-12:45 Lunch

12:45-13:15 **Steve Hipskind (NASA Ames):**
Fluid lensing algorithms: UAS mapping of bathymetry and coral communities

13:15-13:45 **Everett Hinkley (USFS):**
UAS in resource management applications: Opportunities and challenges

13:45-14:45 **Brad Koeckeritz (DOI OAS):**
DOI UAS Strategy: Pilot approval/certification, aircraft acquisition and access to the National Airspace System

15:00-16:15 Proposed Breakout sessions with leads

1. **FUASIC** - Proposal for a Federal UAS Interagency Conference (FUASIC) to align/coordinate Federal UAS priorities and activities (***Bruce Quirk, Steve Hipskind***)

2. **Sensors** - Beyond visible: new sensors needed for UAS borne science (thermal, gas, radio telemetry, magnetometers, radar, lidar); also should include products and information needs ***(Matt Burgess, Terry Slonecker, Matt Trani)***

3. **Applications** - UAS for hazards (***John Stock, Matthew Fladeland***)

4. **DOI Policies** - Learn more about current and future UAS regulations and DOI policies (***Mark Bathrick, Brad Koeckeritz***)

5. **Call for Proposals** – If you're thinking about submitting a proposal for a UAS data collect (***Jeff Sloan, Mark Bauer***)

16:15-16:30 Wrap up and logistics (Bruce Quirk, John Stock)

Day 3 Federal UAS: Thursday, May 21

8:15-8:30 Welcome and logistics (Bruce Quirk, John Stock)

8:30-9:30 Breakout sessions

9:30-10:00 **Mike Story (NPS)**:
Case studies and lessons learned from UAS missions flown for scientific research

10:00-10:30 **Matt Fladeland (NASA Ames)**:
UAS in support of NASA science and aeronautics research

10:30-10:50 Break

10:50-11:20 **Robbie Hood (NOAA)**:
Overview of NOAA UAS Activities

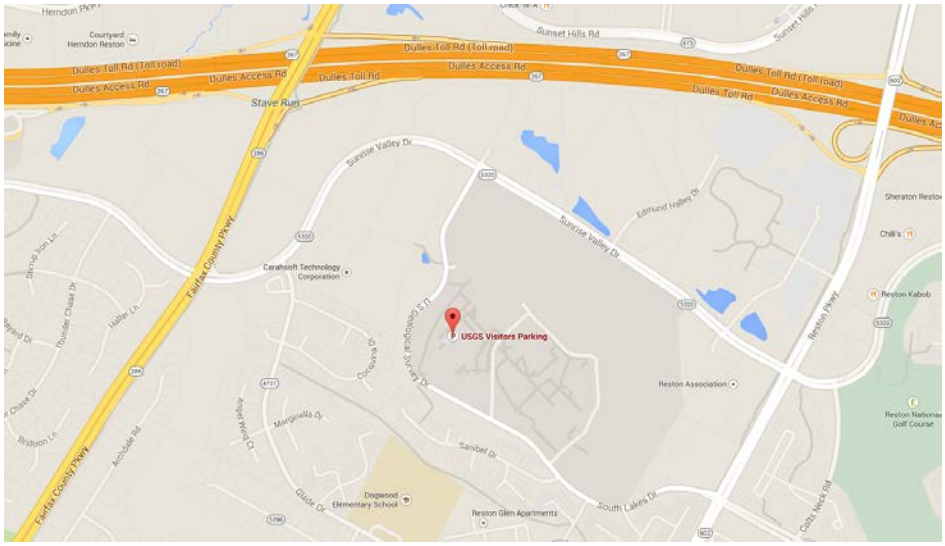
11:20-11:50 **Brian Gullett (EPA):**
UAS applications in emission sampling

11:50-12:30 **Mike Scheuermann (NSF):**
Regulatory issues related to UAS operations in Antarctica

12:30-13:30 Lunch

13:30-15:00 Breakout sessions report back to audience, Open forum on questions

Contacts: Bruce Quirk (quirk@usgs.gov) or John Stock (jstock@usgs.gov)



Please submit questions to Bruce Quirk (quirk@usgs.gov) or John Stock (jstock@usgs.gov) by 13:00, May 22, Thursday: