

Drones for Work

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Drones (UAS)

What are they? (UAS = Unmanned Aerial Systems)

These ...



Not these ...



FAA Drone User Categories

Overview

Recreational



Commercial



Government



Drone Operations

Pilots

Who can be a Drone Pilot?

Recreation Use

- anyone
(can't benefit anyone's work – paid or not)

Commercial Use

- pass FAA Small UAS Knowledge Test

Government Use

- pass FAA Small UAS Knowledge Test, or
- requirements as defined in agreement with FAA



Drone Operations

Airspace

Where can you fly a Drone?

Generally:

- Beyond 5 miles from any airport
- Under 400 ft
- During daytime
- Within line-of-sight (~ 1/3 mile)
- Not over people
- Dependent on property owner permission



Drone Operations

Regulations



FAA Small UAS Regulations (Part 107)

- Went into effect August 31, 2016
- Primarily targeted at Commercial users
- Significantly reduced pilot requirements
- Simplified FAA authorization process
- Simplified operational reporting requirements



Drone Products

For what?

Drones collect high-resolution imagery and video.

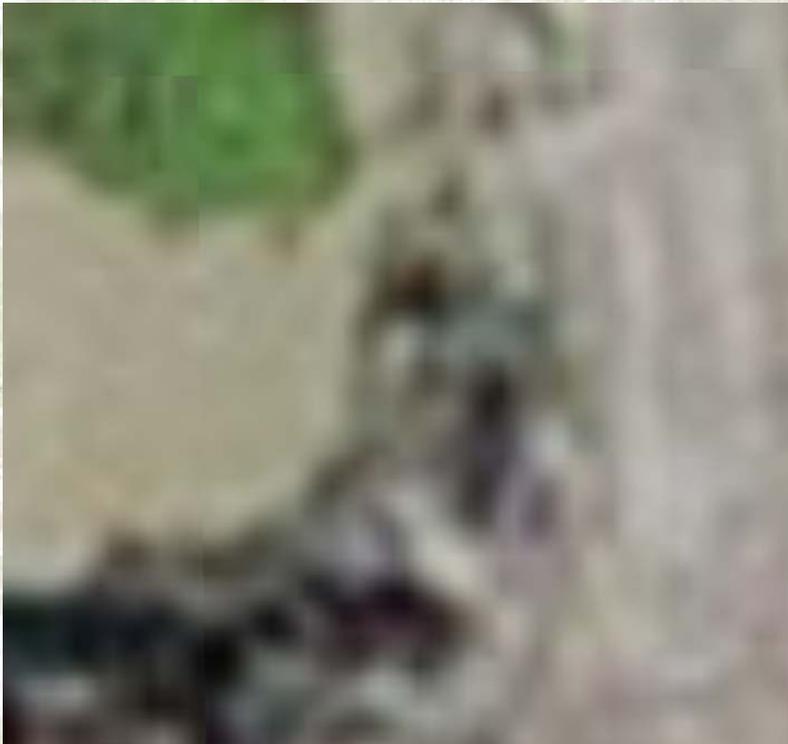
Many types of potential projects:

- Habitat/vegetation/invasives mapping
- Oil spill mapping and monitoring
- Marijuana grow inspections
- Levee surveys
- Land inspections
- Promotional images and videos



Drone Products

Imagery – Gray Lodge WA



Google Imagery:
12-40 inches/pixel



UAS/Drone:
0.5 inches/pixel



Drone Products

Imagery – Pine Creek near Susanville



Google Imagery:
12-40 inches/pixel



UAS/Drone:
1 inch/pixel



Drone Operations

Drone Program

Considerations when starting operations:

- How are we authorized to fly?
- Who will be the pilots?
- What drone(s) to buy?
- How do we ensure we are safe?
- How do we ensure we capture good data?
- Policy, checklists, logs, accessories, maintenance, etc.



Drone Operations

Mission Planning

Considerations for mission planning:

- Is mission in authorized airspace?
- What hazards/risks exist at the site?
- Are there wildlife issues?
- Whose property is it?
- Privacy concerns?
- Good line-of-sight?
- Which software to use?
- How many flights needed?



Drone Operations

Drone Data

Considerations for data collected from drones:

- Who is responsible for processing?
- Imagery vs video processing?
- Where will we store it?
- How will we share it?



Drones for Work

Questions?

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