



La Plata County
Colorado

La Plata County Unmanned Aerial Systems Drone Program

Drone policy overview

- **Governs La Plata County government's use of Unmanned Aerial Systems or drones**
- **Does not impact private or commercial drone use in La Plata County**



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Drone program goals

- **Support county operations**
 - **Life-saving functions**
 - **Emergency management**
 - **Public safety**
- **Improve safety & efficiency**
- **Build upon decades-long aerial imagery program**



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Initial uses

- **Search & Rescue**
- **Mud & rock slides**
- **Wildfire**
- **Flooding**
- **Infrastructure assessment**
- **Documentation**



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Equipment

County budgeted \$40,000 in 2016 for:

- **Phantom, Inspire & Matrice aircraft**
 - 3-mile range
 - 12-40 minutes
 - 55 mph speed
- **Cameras**
 - 16- & 24-megapixel still imagery
 - Low-light & infrared
- **Video capture & feed software**
 - 4k ultra-high-definition video
- **Controllers & software**



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Program structure

Housed in the Office of Emergency Management under a program manager, governed by:

- **POLICY** establishes authority to use drone system
- **PROCEDURE** identifies the program details & team
- **PROJECT** determines specifics for a department's drone use
- **MISSION** describes single-flight objective, parameters & guidelines



Policy overview

- **Establishes definitions & program structure**
- **Creates an iterative framework to govern program**
- **Designed to evolve over time to respond to:**
 - **Emerging technology**
 - **Evolving state & federal regulations**
 - **Expanded uses & acceptance**



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Policy overview

Expanded tool kit

- **To support & augment county operation with evolving technology that provides improved efficiency & safety**



Policy overview

Focused application

- **To protect life & property**
- **Improve & expedite emergency management**
- **Improve situational awareness**
- **Conduct damage assessment**
- **Perform mapping & measuring**



Policy overview

Privacy

Each project must define objective & describe privacy considerations, including:

- **Compliance with state & federal privacy laws**
- **Data collection methodology**
- **Data use, retention & dissemination**

parameters



Policy overview

Public participation

- **Projects will contain a public education component:**
 - **Articulate objective**
 - **Define operational parameters**
 - **Mission notification**



Policy overview

Equipment & training

- **Office of Emergency Management will manage drone equipment**
- **All program personnel must complete required training & certifications prior utilizing equipment**
- **Program follows FAA Part 107 civil drone operation standards**



Policy overview

Project implementation

Projects must describe:

- Purpose, objective & authority
- Safety, equipment & methodologies
- Privacy
- Projects must comply with county, state & federal laws & regulations
- County manager and elected official must approve



Procedure

- **Details program management**
- **Establishes operational categories:**
 - **Emergency management**
 - **Law enforcement**
 - **General survey & inspection**
- **Describes objectives for each category**
- **Discusses training, safety, privacy & data retention practices**



Projects

- **Each department appoints project coordinator**
- **Define objectives for project**
- **Circulate for internal & external input**
- **Addresses purpose, data collection, data use, data retention, equipment types**
- **Establish mission parameters**
- **Projects approved by county manager and elected official**



Missions

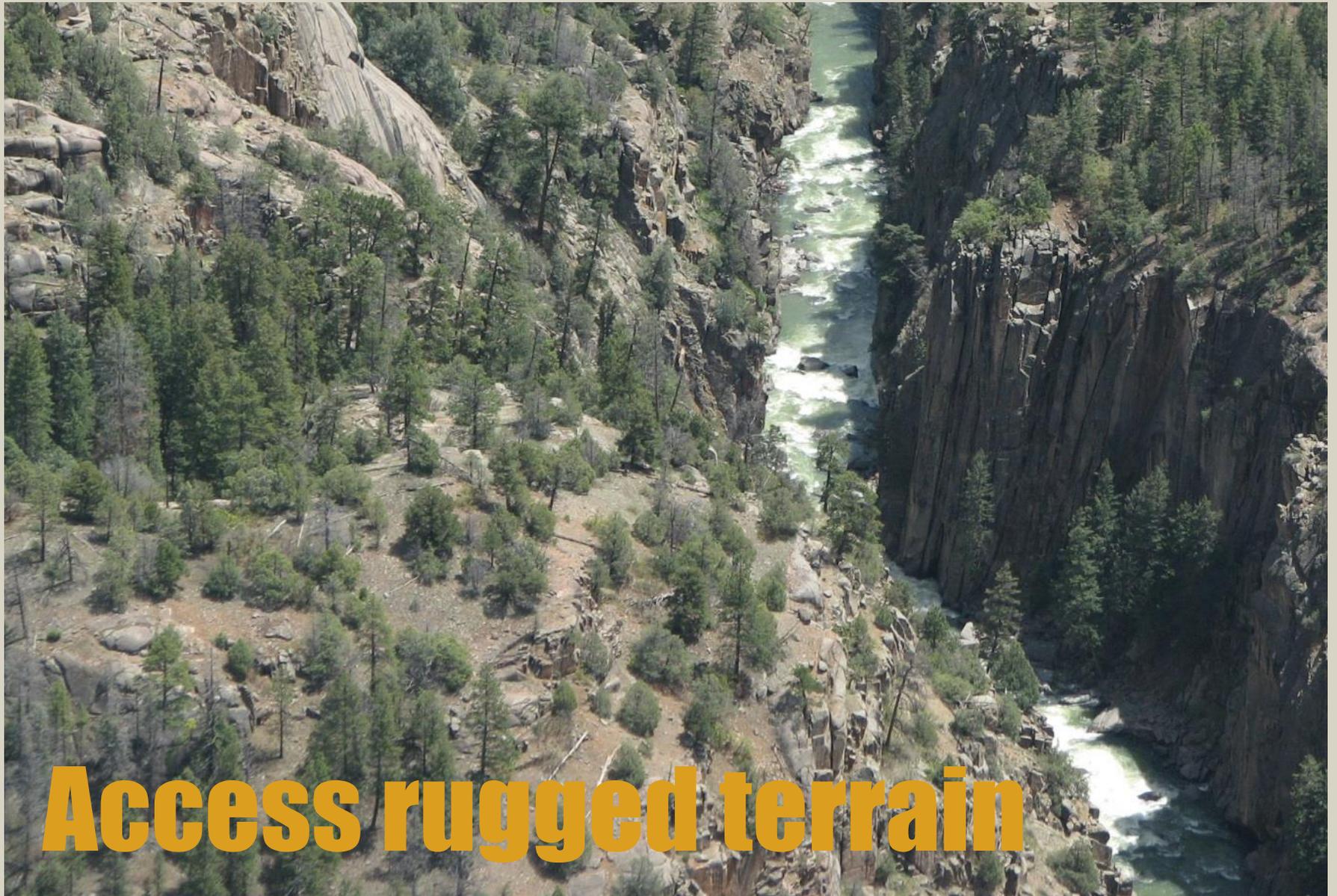
Project coordinator & pilot create mission plan covering one flight event based on project objective:

- **Date**
- **Location**
- **Purpose**
- **Operational details**

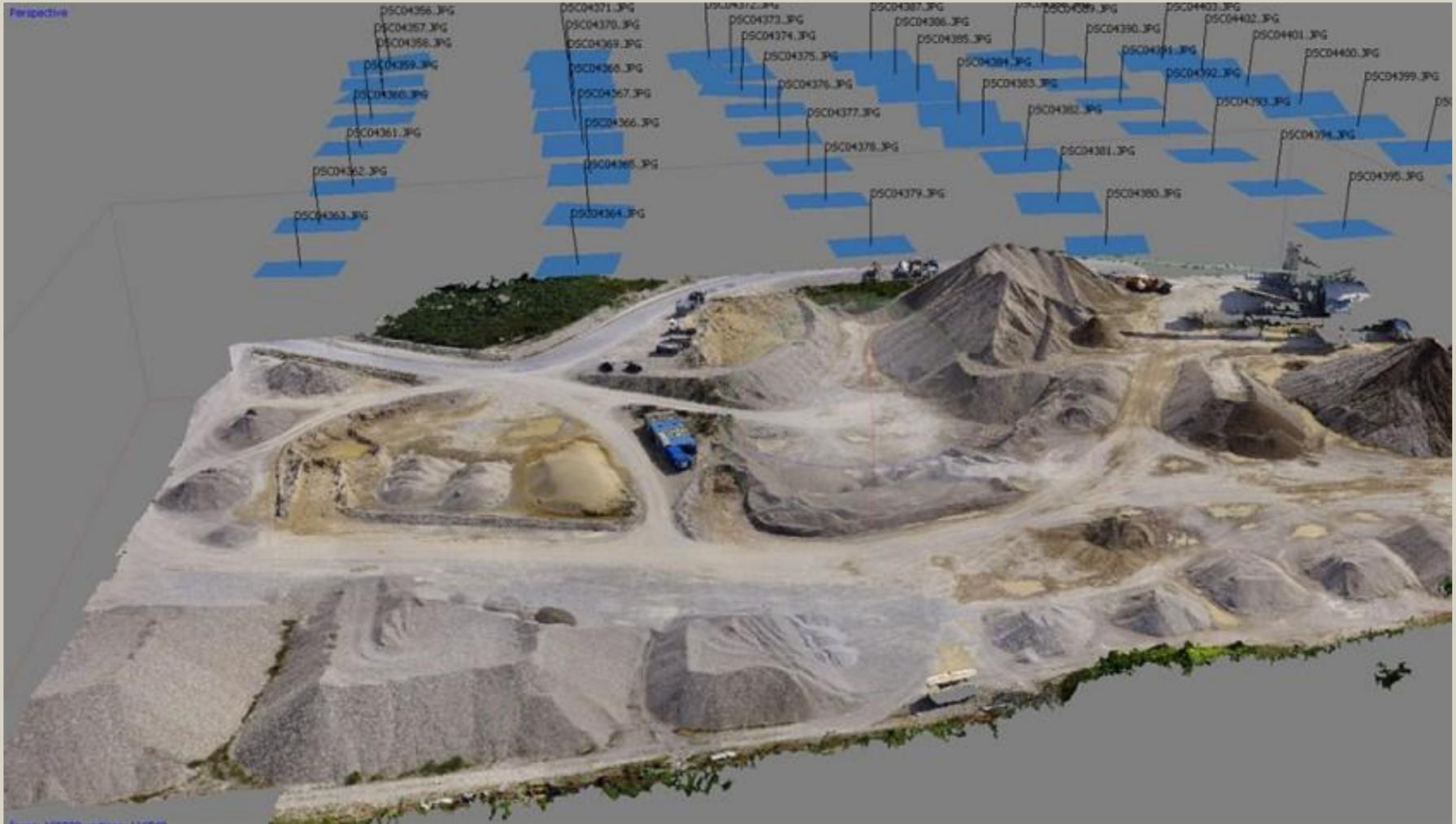




Assess incidents



Access rugged terrain



Robust mapping



Risk assessment



1950 USGS flyover

An aerial photograph showing a wide river valley. A winding river flows through the center of the valley, surrounded by agricultural fields and some buildings. The terrain is relatively flat, and the river has a meandering path. The image is in black and white, typical of a flyover.

1960 USGS flyover

An aerial photograph showing a wide river valley. The river is highly meandering, with several sharp loops and oxbow-like curves. The surrounding land is a mix of agricultural fields, some appearing as dark rectangular patches, and more natural, textured terrain. A straight road or path runs parallel to the river on the right side. The overall image has a grainy, historical quality.

1966 USGS flyover

1993 – Google Earth

24

Google[™] earth

Image U.S. Geological Survey

200 ft



2002 – Google Earth

25

Google earth

Image © 2016 DigitalGlobe

2000 ft



2006 – Google Earth

Google earth

Image © 2016 DigitalGlobe

26

2000 ft



2007 County Aerial



2011 - Google Earth



2014 – Google Earth

An aerial photograph of a residential neighborhood. A large house with a bright green roof is the central focus. To its right is a smaller yellow house. A paved road runs along the bottom right edge. The area is filled with green trees and lawns. A blue rectangular bar is at the top of the page.

2014 County GIS



2015 Pictometry



2015 Pictometry



Drone - 200 feet

Questions?

Please provide input on the proposed policy governing drone usage by La Plata County:

- https://www.surveymonkey.com/r/drone_policy
- megan.graham@co.laplata.co.us

