

FLY UTAH



UTAH AERONAUTICS CONFERENCE
2023

The Future of UAS in Civil Air Patrol: Aerospace Education, Emergency Services, and the Cadet Program

**Lt Col “Baron” Wesemann, Captain Shannon Babb,
and Captain Mike Dyck**

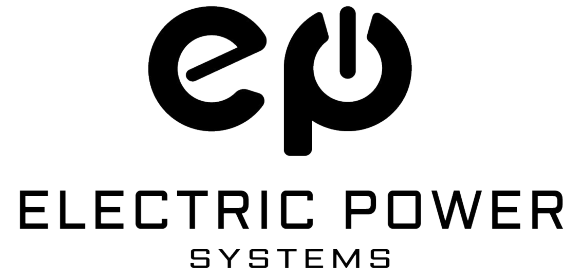


Platinum Partnership





Gold Partnership





Silver Partnership

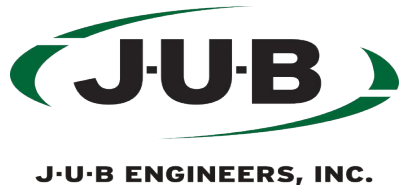


**Governor's Office of
Economic Opportunity**





Bronze Partnership



Exhibitor Partnership



XeVISION



LSI



SkyWest
AIRLINES



ALPINE AIR
EXPRESS



SILENT **F** FALCON™



THALES
Building a future we can all trust



virtower™





Mobile App Partner



Snack Break Partner



Attendee Bag Partner



Evening Reception Partner



AOPA Rusty Pilots Seminar Partner



AXIOM AVIATION





Speakers



Capt Shannon Babb



Capt Mike Dyck



Lt Col "Baron" Wesemann



Civil Air Patrol - Utah Wing

The Future of sUAS in CAP:
Aerospace Education,
Emergency Services,
and the Cadet Program



Volunteers Serving America's Communities, Saving Lives, and Shaping Futures.





Who We Are, What We Do

- All volunteer civilian auxiliary of the U.S. Air Force
- Chartered by Congress December 1, 1941



Volunteers Serving America's Communities, Saving Lives, and Shaping Futures.

Organization of CAP

- 52 Wings in 50 states, DC & Puerto Rico
- Squadron is basic unit
- Cadet, composite, and senior
- Cadets: Ages 12-20 (join by 18)
- Seniors: Adults ages 18-118
- More than just pilots...



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Aviation Opportunities

- Single Engine aircraft
- Cadet orientation rides
- Glider flights
- Balloon flights
- UAS Surrogate



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CAP Missions

- Search and Rescue / Disaster Relief
 - Cadet Programs
 - Aerospace Education
- sUAS fits into all three missions





sUAS in Cadet Programs

Aviation knowledge

- Aviation Weather
- National Airspace
- Flight Principles
- Aviation Careers



sUAS in Cadet Programs

- Cadet sUAS Badge





sUAS in Aerospace Education

- Internal mission
 - Activities
- External mission
 - Community events
 - Partnerships





sUAS in Aerospace Education

- Educational activities
- Lead in to aviation careers
- Lead in to pilot training



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sUAS in Emergency Services

- Disaster Assessment
- Mapping
- Surveying
- Monitoring
- Search & Rescue



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CAP sUAS Capabilities

DoD-approved Skydio
X2D

- RGB and Thermal cameras





CAP sUAS Capabilities

AeroVironment Quantix
Recon VTOL

- RGB and Multi-spectral cameras





CAP sUAS Capabilities

Wingtra One VTOL

- DoD approved
- Cameras
 - RGB (NADIR & Oblique)
 - Multi-spectral





CAP sUAS Teams



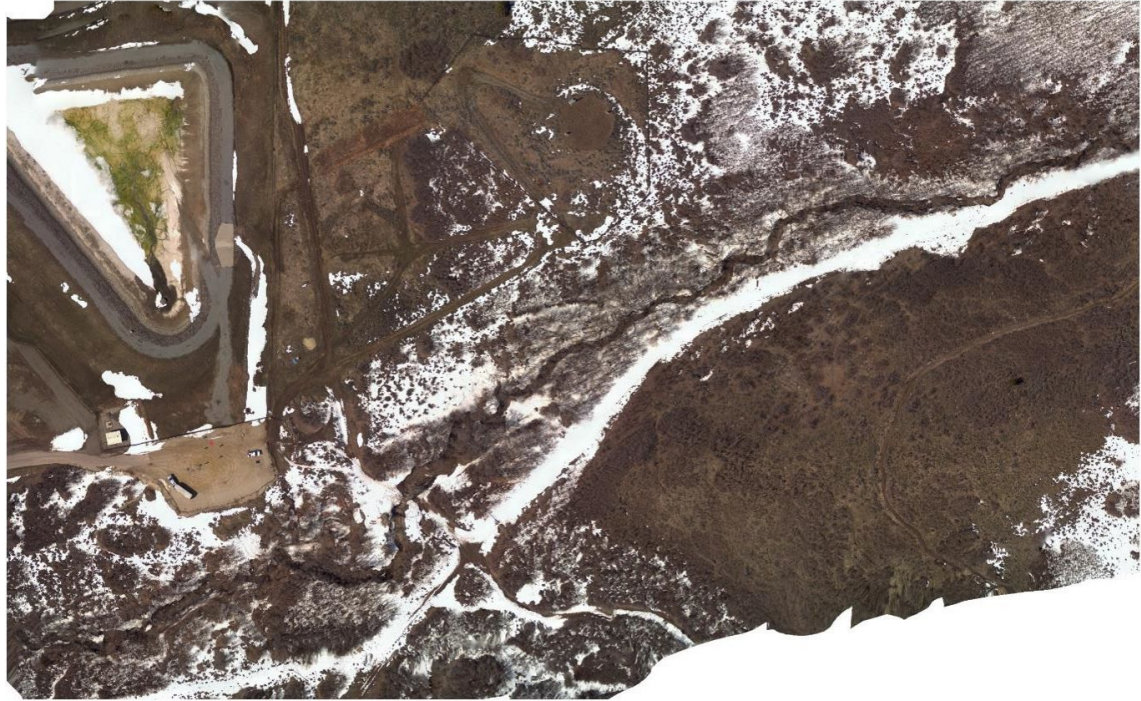
Pilot, Technician, Observer



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Mapping Results



Volunteers Serving America's Communities, Saving Lives, and Shaping Futures.





Highland City Floodplain

Aerial Survey of Highland City Floodplain by CAP Drone on training event

- Highland City engineers determined source of flooding from the images





Aerial Imaging of Jordan River

CAP provided imaging of the Jordan River to help in planning for potential erosion from increased flows





Hobble Creek Delta



- Mapped 55 acres as a test of the Wingtra drone
- The scientists got excited!





June Sucker Recovery Implementation Program



- Mapping 300 acres at the north end of the Provo Airport
- Providing RGB and multi-spectral imaging
 - Total images to date: 113,641



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