UAV’s for Incident Commanders

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Learning Objectives

- Types of Incidents for UAV use
- Benefits of UAV’s at incidents
- Liabilities and drawbacks to UAV’s
- How to fit UAV’s into the ICS structure
- How to utilize UAV information in the IAP
- UAV Necessity???
Types of Incidents

- Large Fires-Urban
- Large Fires-Wildland
- Hazardous Materials Incidents
- Technical Rescue/US&R
- Natural Disasters
- EMS Response
- Aircraft Incidents
Large Fires - Urban

**Warehouse**
- Define Scope/Situational Awareness
- Locate fire
- Determine location for attack
- Defensive positions
- Lingering Hotspots (Video)
High Rise Fires

- Situational Awareness
- Fire Floor/Roof
- Potential Victims
- Fire progression
- Attack progress
Wildland

- Fixed Wing vs. Rotary Wing
- Scope
- Fire Travel
- Crew status/location
- Structures threatened
- Potential victims
- Aircraft Hazards/Limitations
Hazardous Materials/EOD

- Recon
- Air Sampling
- Plume verification
Technical Rescue/Search/Water

- Optical/IR Sensors
- Piloted or Autonomous Flight
- Local Experience
  - Critical missing STFD
  - Drowning – Great Miami X3
  - Jumper
  - Boat in distress
Natural Disasters

- Flooding
- Tornado
- Earthquake/Building Collapse
- Information for declaration
EMS Response

- Mass Casualty
- Active Shooter
Aircraft Incidents

- High Impact Crash
- Low Impact Crash
- Debris Field
- Transponder Location
Benefits of UAV’s

- Ability to see beyond ground position
- Ability to utilize Thermal Imaging Technology
- Ability to record findings
- Keeping responders from hazard area
- Allows a point of reference for responders
- Can be utilized at the mobile command post and transmitted to EOC
Liabilities and Drawbacks

- Federal Regulations & the COA
- Must ensure coordination and proper operation to prevent danger to responders and community
- Privacy laws
- Possible need to track evidence
  - FOIA Laws
  - Record Retention Laws
- Immunity/Insurance Requirements
How to Fit UAV’s into ICS Structure

- **Air Operations Branch for Operations**
  - Managed by Air Operations Branch Director
  - Understands FAA and other flight rules
  - Can coordinate UAV’s Helicopters, and other aircraft
  - Access to proper radio frequencies

- **Planning Section**
  - Data can be combined with other incident data to support IAP
  - Data can be stored by Documentation Unit Leader
  - Check-in the UAV through Resource Unit Leader
How to Utilize UAV information in the IAP

- Ideally data utilized by Situation Unit Leader in the Planning Section
  - Data can be combined with other incident data to support IAP
    - Mapping/Video
  - Data can be stored by Documentation Unit Leader
  - Check-in the UAV through Resource Unit Leader
  - Video utilized for Operational Briefing
Do we all need one????

- Use Statistics!
- Duplication of resources
- Operator Currency/
  Experience