



## Technical Report: 2018 in Review

It's been a busy year. Here are the EMHS.CDRP UAS team highlights:

### **Major Mobilizations**

#### **NPS UAS Survey of Civil War POW Camp in Thomasville, GA (February 2018)**

The team surveyed and mapped a portion of a Civil War POW camp in Thomasville, GA in support of the Southeast Archaeological Center through NPS and City of Thomasville. The team is currently working on compiling an affordable LIDAR solution for public agencies to enhance below-canopy mapping and research.

#### **Kilauea Volcanic Eruption (May 2018)**

Two team members deployed to Hawaii in support of the Center for Robot-Assisted Search and Rescue (CRASAR). Team members flew mapping, SAR, volcanic flow observation, SO<sub>2</sub> monitoring, and life safety missions in tandem with the University of Hawaii at Hilo, Hawaii County Fire Department, and USGS.

#### **Belize City, Belize (June 2018)**

Two team members supported the Center for Disaster Risk Policy's preparedness and mitigation efforts in partnership with the Belize Association of Planners (BAP). Team members created orthomosaic maps of four separate neighborhoods in the city and examined canal junctures and overturn in separate locations.

#### **Hurricane Michael (October 2018)**

EMHS.CDRP UAS deployed to Walton County in support of Walton County Emergency Management, flying six hours post eye landfall near San Destin. The following day, the team deployed to Bay County in tandem with CRASAR and USAA to assist in immediate reconnaissance of Mexico Beach. The team flew life safety nighttime FLIR missions in search of survivors. The EMHS.CDRP UAS team operated in Mexico Beach for four days post-landfall, to construct a complete orthomosaic map of Mexico Beach. In addition to UAS operations, team leader David Merrick directed manned/unmanned airspace coordination through Florida Task Force 2. The team also supported the UAS coordinator position at the State Emergency Operations Center (SEOC) in Tallahassee, FL.

### **Search and Rescue Deployments and Exercises**

- **CRASAR/RWB SAR Exercise** (February 2018)
- **Alachua County UAS MOBEX** (February 2018)
- **Utah Search** (April 2018)
- **New Hampshire UAS Search Integration Exercise** (August 2018)
- **Missing Persons Investigations: (1) in Thomasville, GA and (3) in Tallahassee, FL** (2018)

### Additional Operations

- **FSU University Housing Flights** (Summer 2018)
- **FSU Union Demolition Mapping and Overwatch** (Fall 2018)
- **FSU Football Game Overwatch** (Fall 2018)

### Keynote Presentations

- **UAS Disaster Conference in Miami** (April 2018)

### Training, Demonstrations, and Unmanned Pilot Development

- **Presentations and Invited Talks:**
  - ASPA
  - AUVSI
  - **Bureau of Archaeological Research (BAR)**
  - **Florida Association of Cadastral Mappers**
  - **FDLE Pilot Demonstration**
  - **Governor's Hurricane Conference**
  - **National Hurricane Conference**
  - **HERicane**
  - **National CERT Conference**
  - **SHRUG**
- **Airspace Management at Public Safety UAS Conference in VA** (March 2018)
- **Part 107 Operator Course** (July and December 2018)
- **Night Flight Certification Course** (July 2018)
- **Beginner Technician Operations Course** (November 2018)

### Grants Work

- Hurricane Irma Imagery Classification through National Science Foundation RAPID Grant
- Hawaii Volcanic Eruption/Imagery Dehazing Tests through National Science Foundation RAPID Grant

### Acquisitions

- (1) Autel Evo (courtesy of Autel through Drone Nerds)
- (2) Autel X-Star Premiums (courtesy of Autel through Drone Nerds)
- (2) DJI M210 airframes

- SlantRange 3px multispectral sensor

#### **Software Tested/Added to Cache**

- CivTAK
- DJI Pilot
- Edgybees
- SlantRange Processing

#### **Partners**

- Alachua County Fire Rescue
- University of Hawaii at Hilo
- Rocky Mountain Unmanned Systems
- ScentEvidence K9
- Southeast Archaeological Center
- CRASAR

#### **New Training Courses Available**

- Response Technician I/II
- Night Flight Technician
- Part 107 Operator
- Beginner Technician

If you are interested in training with EMHS.CDRP UAS, please email [info@cdrp.net](mailto:info@cdrp.net).

Happy New Year!