



Walter Wright, Jr.
wwright@mwlaw.com
(501) 688.8839

Arkansas Department of Energy and Environment UAV/Drone Program: Dan Pearson (Chief Information Officer) Arkansas Environmental Federation Webinar Presentation

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Mr. Dan Pearson of the Arkansas Department of Energy and Environment (“ADEE”) undertook a presentation on May 15th as part of the Arkansas Environmental Federation Land & Sustainability Webinar Series addressing:

Arkansas Department of Energy and Environment UAV/Drone Program (“Presentation”)

Mr. Pearson serves as ADEE’s UAV Program Manager.

A number of state environmental agencies and environmental service organizations utilize unmanned aerial systems (“UAV” [i.e., “drones”]) for various purposes. For example, a February 2021 Environmental Council of the States (“ECOS”) report notes that state environmental agencies have used drones to undertake activities such as:

- Surveillance
- Enforcement
- Permit support documentation
- Waste and landfill inspections
- Illegal dumping of chemicals, oils, or waste tires
- General emergency response functions including facility discharges, train derailments, truck accidents, and oil spills
- Investigation of unusual events

The ECOS report notes that agencies use drones because of their ability to:

- Quickly obtain data
- Provide more effective response to emergencies
- Ensure worker safety
- Improve environmental results

ADEE is one of the state environmental/energy agencies utilizing drones.

Mr. Pearson’s Presentation addressed topics such as the startup of the ADEE program. Key personnel in the drone program are identified as:

- Direction and Management
- Lawrence Bengal – ADEE Chief Technical Officer/Oil and Gas Commission Director
- Dan Pearson – ADEE Chief Information Officer/Private Pilot
- Original RPICs and VOs
- Jeremy Ramsey – Oil and Gas Commission technician
- Chris Krou – DEQ Hazardous Waste Branch Manager
- Brian Kehner – AGS GIS Technician

Training and Procedure Establishment is described as:

- 10 Days On-Site with Flight Safety Systems (Including Build Documentation and Procedures)

Documentation is described as including:

- Policy
- Mission Request
- Mission Checklist
- Flight Log
- Flight Checklist
- Emergency Procedures
- Pilot Application

The Presentation lists risk management tools as:

- Weather
- UAV Forecast
- sUAS-FRAT
- AIRMAP

Mr. Pearson notes that the first UAV purchased included a DJI Phantom 4 Pro whose abilities include:

- Photogrammetry
- Video
- Photo

The criteria for selection is stated to include:

- Familiar to RPICs, similarity to training aircraft
- Very solid, capable and stabile aircraft
- Technology support of the initial mission requirements

The Phantom 4 Pro Missions are stated to have included:

- Algae bloom
- Mining Survey
- Landslide

An additional drone purchased is referenced as an Autel EVO II. Characteristics of this drone include:

- Go Command
- Photogrammetry
- Video
- Photo
- Thermal

Mr. Pearson noted:

. . . As the emerging technology of small unmanned aircraft solutions continues to build and grow, the E&E UATS team will continue to expand knowledge and professional skills.

Challenges identified during the Presentation include:

- Current and proficient with the air craft and the data processing tools
- New and improved air craft and towable data collection technology
- New FAA regulations and requirements
- Mission requirements will guide the program into new technology

A copy of Mr. Pearson's slides can be downloaded [here](#).