UAS Program External Review

Development

Evaluate UAS solutions that meet the needs of identified NOAA observing requirements

8 March 2017

CONSIDERATIONS FOR EVALUATING UAS OBSERVING STRATEGIES

Evaluation of Business Case

- Prototype Concept of Operations
  - Platform, payload, observing systems
  - Airspace and frequency spectrum
  - Mission scenarios
  - Staffing and travel
  - Information management and visualization
  - Costs
  - Support equipment and shipping
- Impact Studies
  - Data impact or scientific significance
  - Cost and operational feasibility analysis

Policy Considerations

- Airspace access and operator certifications
  - FAA Part 107 - implementing waivers to accommodate technology advances
  - Certificates of Authorization to Fly
- NOAA Aircraft Policy
- Frequency Spectrum Policy
- National Environment Policy Act
- Public Access to Research Results
- Management of Privacy Information Policy
- Cybersecurity Compliance

EXAMPLES OF OBSERVING STRATEGY RESEARCH WHICH HAVE PROGRESSED PAST THE RESEARCH KEY DECISION POINT

Development – Evaluating High Impact Weather Monitoring UAS Strategies

OAR / Funded Cooperative Institute Project - *Lower Mississippi River Forecast Center and NERR Habitat Mapping and Restoration using fixed and rotary wing UAS - (Dr. Robert Moorhead / Northern Gulf Institute)*

OAR / Testbed Project with NWS, NESDIS, OMAO

- *Sensing Hazards with Operational Unmanned Technology (SHOUT) Mission Concept - (Dr. Jason Dunion / Cooperative Insitute for Marine and Atmospheric Studies)*
- *SHOUT Cost and Operational Feasibility Study - (Phil Kenul / TriVector Services – Cherokee Nation Technologies)*
- *SHOUT Data Impact Study - (Dr. Gary Wick / Earth System Research Laboratory)*

Development – Evaluating Marine Monitoring UAS Strategies

NOS / Funded Partnership - ***Demonstrating small UAS for Oil Spill Simulations and Environmental Response Management Application (ERMA)- (Robb Wright, NOS)***

Development – Evaluating Polar Monitoring UAS Observing Strategies

NOS / Funded Partnership - ***Demonstrating small UAS for Oil Spill Simulations and Environmental Response Management Application (ERMA) - (Robb Wright, NOS)***

CRADA Partnership - ***Developing UAS Capabilities for Polar Applications - (Jason Story/USCG and Brian Walsh/Aerovironment)***

OAR / UAS FY12 RFP Project - ***Modified AirCore for Non-CO_2 Trace Gases on NOAA SkyWisp Unmanned Aircraft Systems (UAS) – (Dr. James Elkins/Earth System Research Laboratory)***