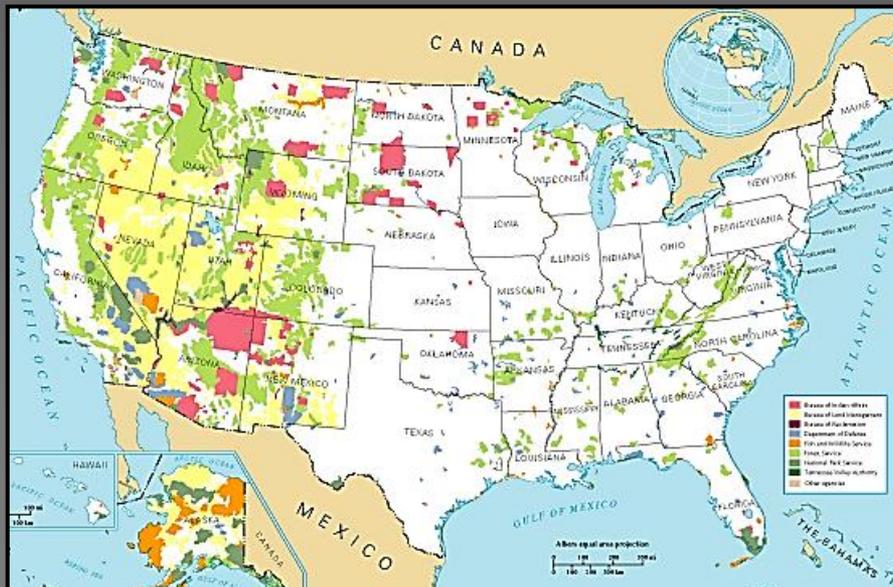


# USGS UAS Project Office Mission

*Enhanced Earth Observations = New Science = More Informed Decisions*

The USGS Unmanned Aircraft Systems (UAS) National Project Office is implementing cost-effective, safe, and efficient technology into the Department of the Interior's decision making toolbox. UAS technology is being employed by scientists, resource managers and incident support teams across the Department for a wide range of applications. UAS provides the USGS and our partners with the opportunity to gain access to an increased level of persistent monitoring of earth surface processes in remote areas that have been difficult or nearly impossible to access before.



Bureau of Indian Affairs  
Bureau of Land Management  
Bureau of Ocean Energy Management  
Bureau of Reclamation  
Office of Surface Mining  
U.S. Fish and Wildlife Service  
National Park Service  
U.S. Geological Survey



# Family of Systems

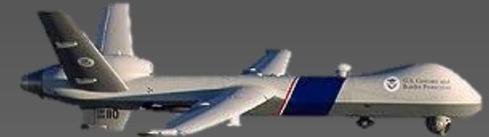
## Platforms:

- Raven 4.2 lb, 36” wing span, battery powered
- T-Hawk 20 lb, 21” wide, gas powered
- High Altitude Long Endurance Systems (HALE)

## Enhancements & Investigations:

- Implementation of GoPro - 1080P HD camera
- Chemical- Gas Plume Detection Sensor
- Radio Telemetry Sensor
- Electromagnetic Sensor
- Photogrammetric Point Cloud Processing
- Direct ingest of files into Geographic Information Systems

Prediction: *By 2020 UAS will emerge as the primary collection platform for Dept. of the Interior remotely sensed data*



# UAS Missions

## Environmental

- Sandhill Crane Population Survey, CO
- Pygmy Rabbit Landscape Habitat Study, ID
- Riparian Survey John Day River, OR
- Grizzly Bear Monitoring, MT
- Elk Population Survey, MT
- Vegetation Inventory and Water Survey, MT
- Sage Grouse Inventory, CO

## Public Safety

- Abandoned Mine Lands Survey, CO
- Coal Seam Fire Detection , CO, WV, MT
- Wildfire Incident Support, AZ
- Monitor Volcanic Activity, HI
- Survey Surface Mines, WV
- Flood Mapping- Missouri/Mississippi Rivers
- Levy Inspections- Mississippi River

## Resource Management

- Fence Inspection, Invasive Surveys, HI
- Archeological Survey of Mohave Nat. Preserve, CA
- Environmental Survey of Palmyra Atoll, Northern Pacific Ocean

## Scientific Research

- Assess Impacts of Elwha Dam Removal, WA
- Hydrographic Survey, MT
- Fire Science Research, FL
- Monitor Forest Health, CO
- Missouri River Bank Erosion Study, SD



# Questions?

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