



# City of Las Cruces®

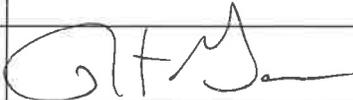
PEOPLE HELPING PEOPLE

## COUNCIL WORK SESSION SUMMARY ROUTING SLIP

Meeting Date November 9, 2015

TITLE: UNMANNED AIRCRAFT SYSTEM (UAS) UPDATE.

- Are there attachments to the Council Work Session Summary? Yes  No
- Will there be a Video Presentation for this item? Yes  No
- Will there be a PowerPoint Presentation for this item? Yes  No
- If "yes", will a copy of the PowerPoint Presentation be included on the Council Work Session Agenda? Yes  No

DEPARTMENT / ORGANIZATION	SIGNATURE	PHONE NO.	DATE
Drafter/Staff Contact	Dennis Zaklan / Janice Jones		10/30/15
Department Director			
Other			
Assistant City Manager/CAO (if applicable)			
Assistant City Manager/COO (if applicable)			
City Manager			



# City of Las Cruces®

PEOPLE HELPING PEOPLE

## Council Work Session Summary

Meeting Date November 9, 2015

**TITLE:** UNMANNED AIRCRAFT SYSTEM (UAS) UPDATE.

**PURPOSE(S) OF DISCUSSION:**

- Inform/Update
- Direction/Guidance
- Legislative Development/Policy

**BACKGROUND / KEY ISSUES / CONTRIBUTING FACTORS:**

This presentation will provide information to the City Council about the New Mexico State University (NMSU) Unmanned Aircraft Systems (UAS) Flight Test Center current and future business. It provides an overview of what a UAS is, and ongoing initiatives.

**SUPPORT INFORMATION:**

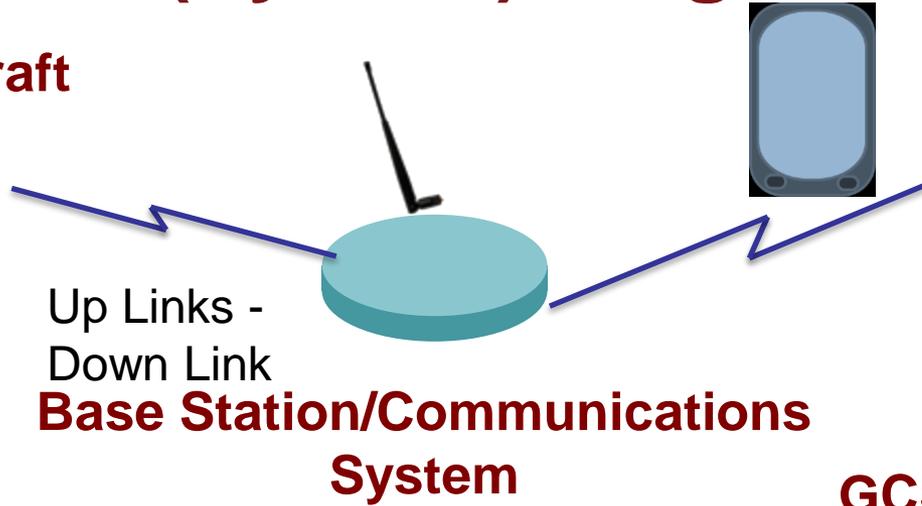
N/A

# Las Cruces City Council UAS Brief

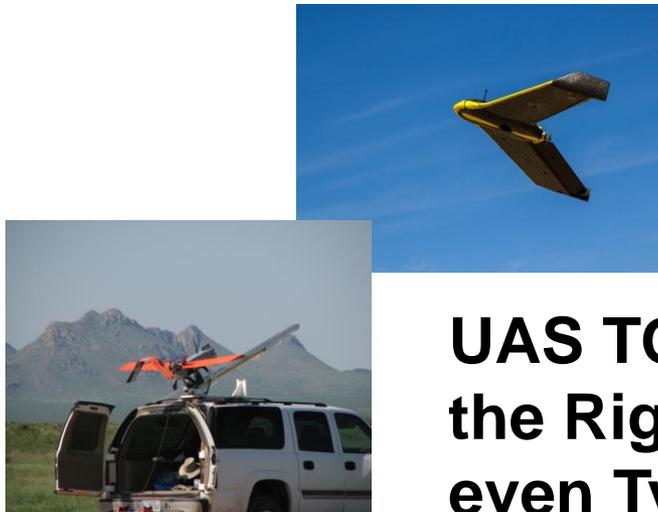


# UAS (System) Diagram

## Unmanned Aircraft



## GCS: Pilot/Payload Operator Control



**UAS TOOL - Right Tool for the Right Job Not All UAS even Types are the Same**



# NMSU UAS FTC Program Work Areas

## RDT&E/ Engineering

- UAS Design
- Small/Micro UAS



## Flight Test Center

- UAS FTC
- Data Collection
- Flight Ops
- Facilities



## Demonstrations

- Weather: TAMDAR
- Science: USGS and BLM
- BAT III Data
- ATDSS III
- Flight Demonstrations



## Human Factors

- Trust in Automation
- Control Reversals
- Work Load



## Regulatory

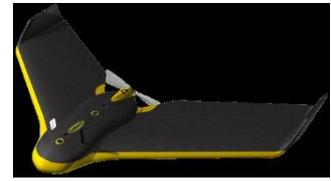
- Propulsion Test Lab
- Component Test Lab
- Arctic Airspace Analysis
- Flight Procedures
- SAA Research



FAA UAS Center of Excellence Team Member - ASSURE



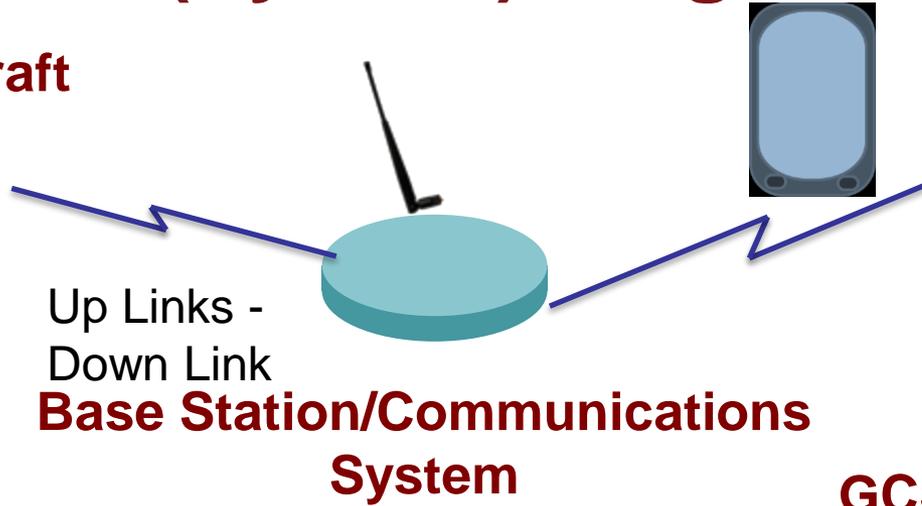
# Pro-Active UAS Integration



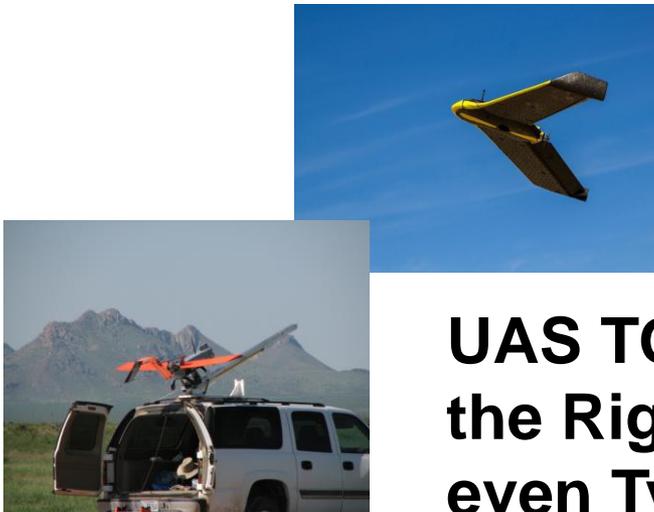
- Time – Already behind (Est. 1M sold at Holidays)
- Major Issues **Safety** – **Privacy** – **Governance**
  - Need Policy, Integration Plan, Legislation
  - Procedures, Education & Oversight
- Already Being Used **Legally** and **Otherwise**
  - Commercial & Hobbyist & Government
- Financial Issues
  - Liability
  - Registration
  - State Use? Cost effective (Own/Lease/Contract)

# UAS (System) Diagram

## Unmanned Aircraft



## GCS: Pilot/Payload Operator Control



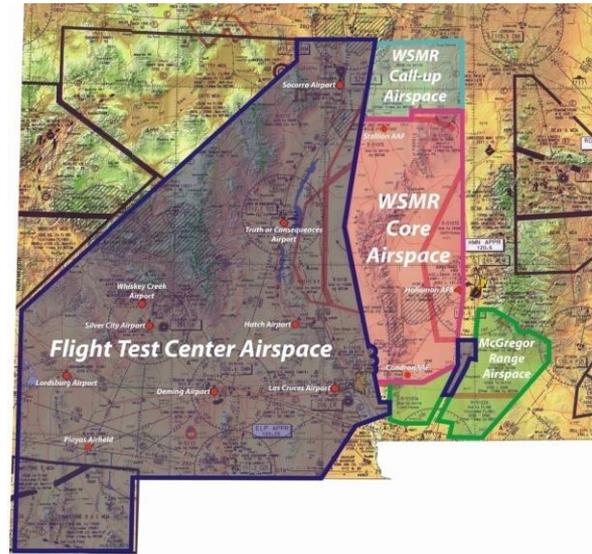
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# UAS FTC Current Airspace

## Civil Applications

- Disaster Assessment & Recovery
- Infrastructure Monitoring
- Natural Resource Monitoring
- Environmental Monitoring
- FAA UAS Safety Cases
- Concept of Operations Development and Validation



## Enabling Testing For:

- UAS OEM
- Payload and Sensor OEM
- Service Providers
- Data & Image Network Developers

## 15,000 Square Miles of Airspace

- Exceptional Weather and Visibility
- Sparsely Populated
- 7 Airstrips, Plus Expeditionary Sites
- We share Call-up Areas

# NMSU UAS Pictures



# NMSU UAS FTC

## Current Business

- Small UAS Service Provider (Sec 333)
  - USBR            -State/County
- SUAS Testing
  - Manufacturers & Home Built
- MALE UAS Testing
  - 2 Systems under contract
- HALE UAS Testing
  - 2 Systems under contract

## Future Business

- SUAS Service Provider State/County/City/Civil
- State UAS FTC SME's Assist in Legislative Support Train/Assist Gove Elements
- HALE & MALE UAS Flight Test/Crew Training
- FAA UAS COE Research UAS Research for File & Fly

# UAS TOOL - Right Tool for the Right Job

## Not All UAS even Types are the Same

BAT 3



Hornet Maxi



B-100



Aeryon Scout

eBee



Orbiter



NMSU Aerostar UAS



# Point Of Contact

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