

Army Compatible Use Buffer Program



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Army Compatible Use Buffers to Support Army Testing

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Leading Change for Installation Excellence



Purpose

- **Discuss the Encroachment problem at Testing Installations.**
- **Provide an overview of the ACUB program on testing installations.**



Military lands become refuges of biodiversity

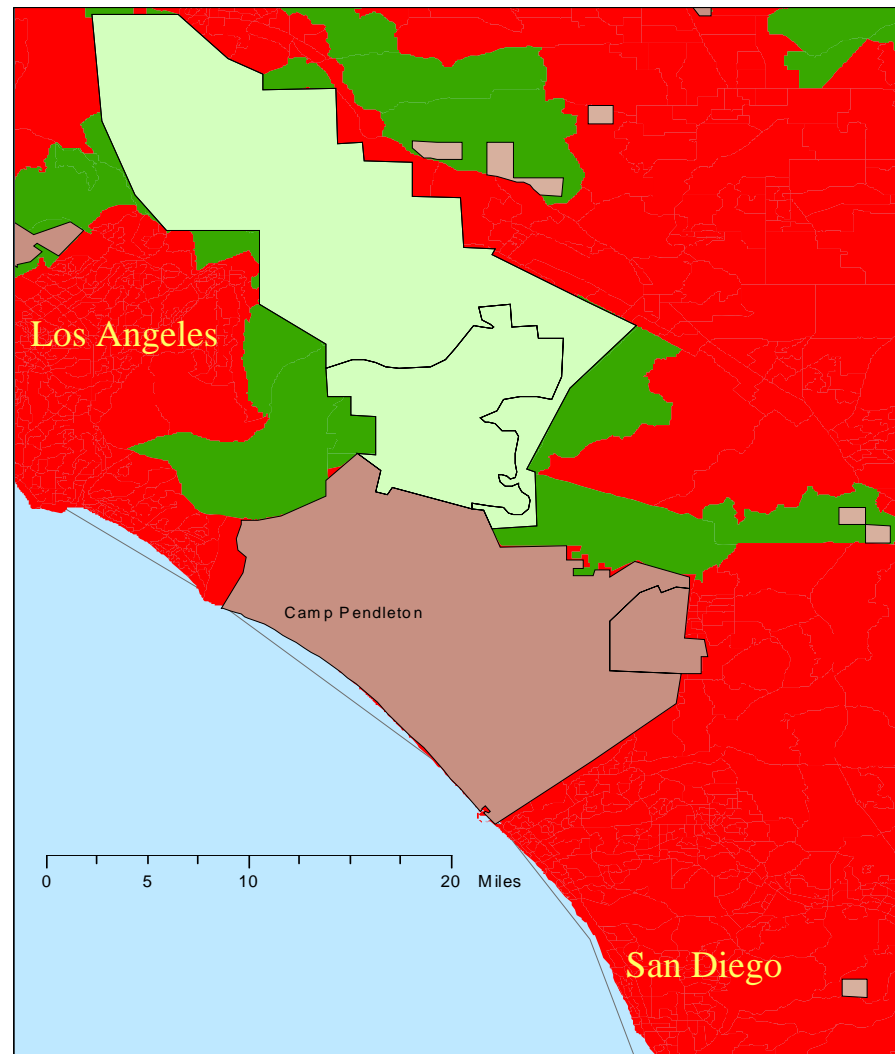
California Gnatcatcher

51,000 acres critical habitat

13,000 acres critical habitat



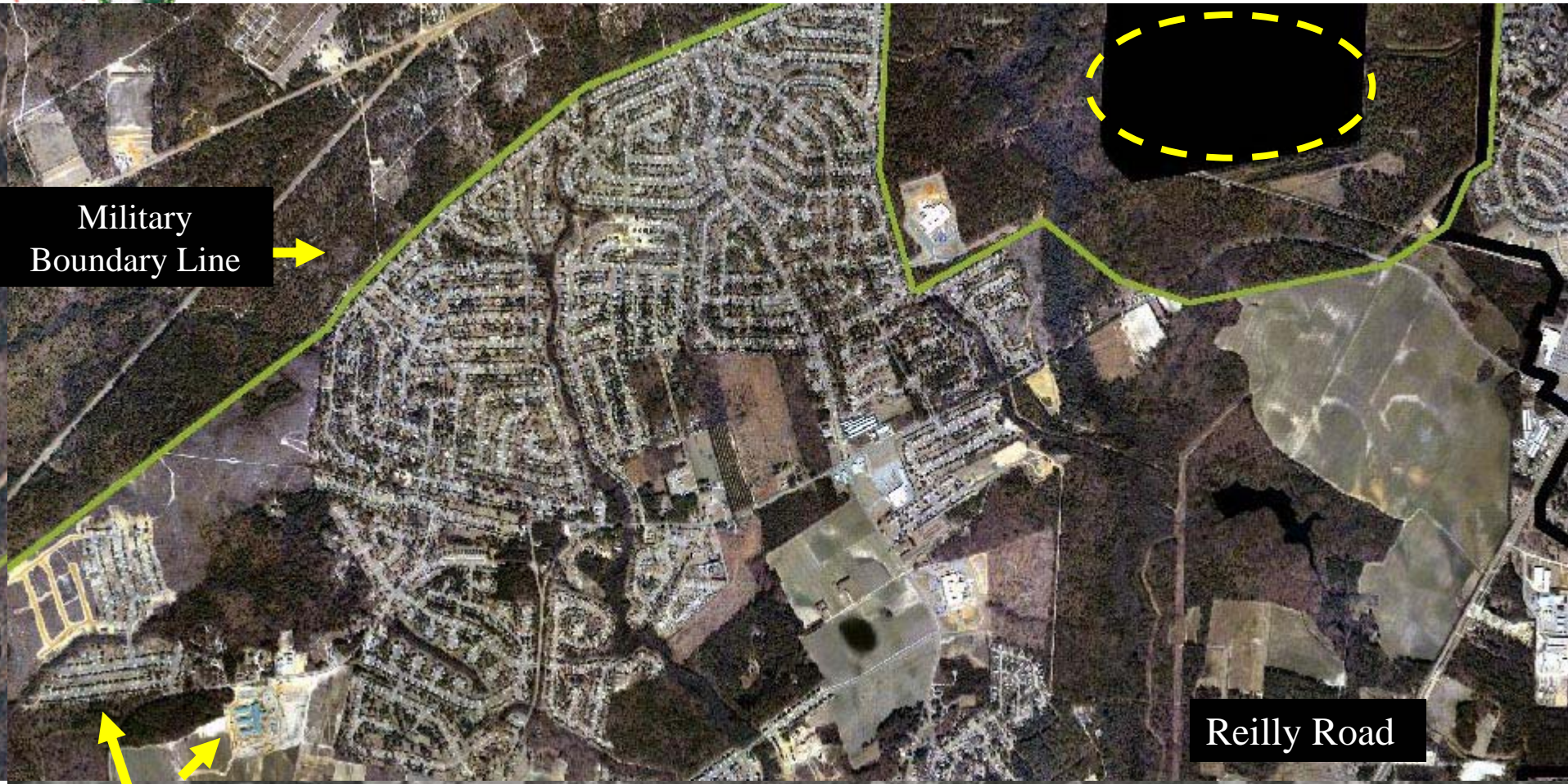
San Diego fairy shrimp



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2000



Military Boundary Line

Reilly Road

New elementary school and residential development

Army Compatible Use Buffer Program



Ft. Bragg, NC

Firing Ranges



Installation Boundary

Suburban Sprawl



Testing Impacts of Encroachment

- **Installations impact neighbors**

- **Noise**
- **Smoke / dust**
- **Electromagnetic**



- **Neighbors impact installations**

- **Complaints**
- **Light pollution (night ops)**
- **Testing restrictions (type, timing, and location)**
- **Habitat loss (increased conservation burden)**



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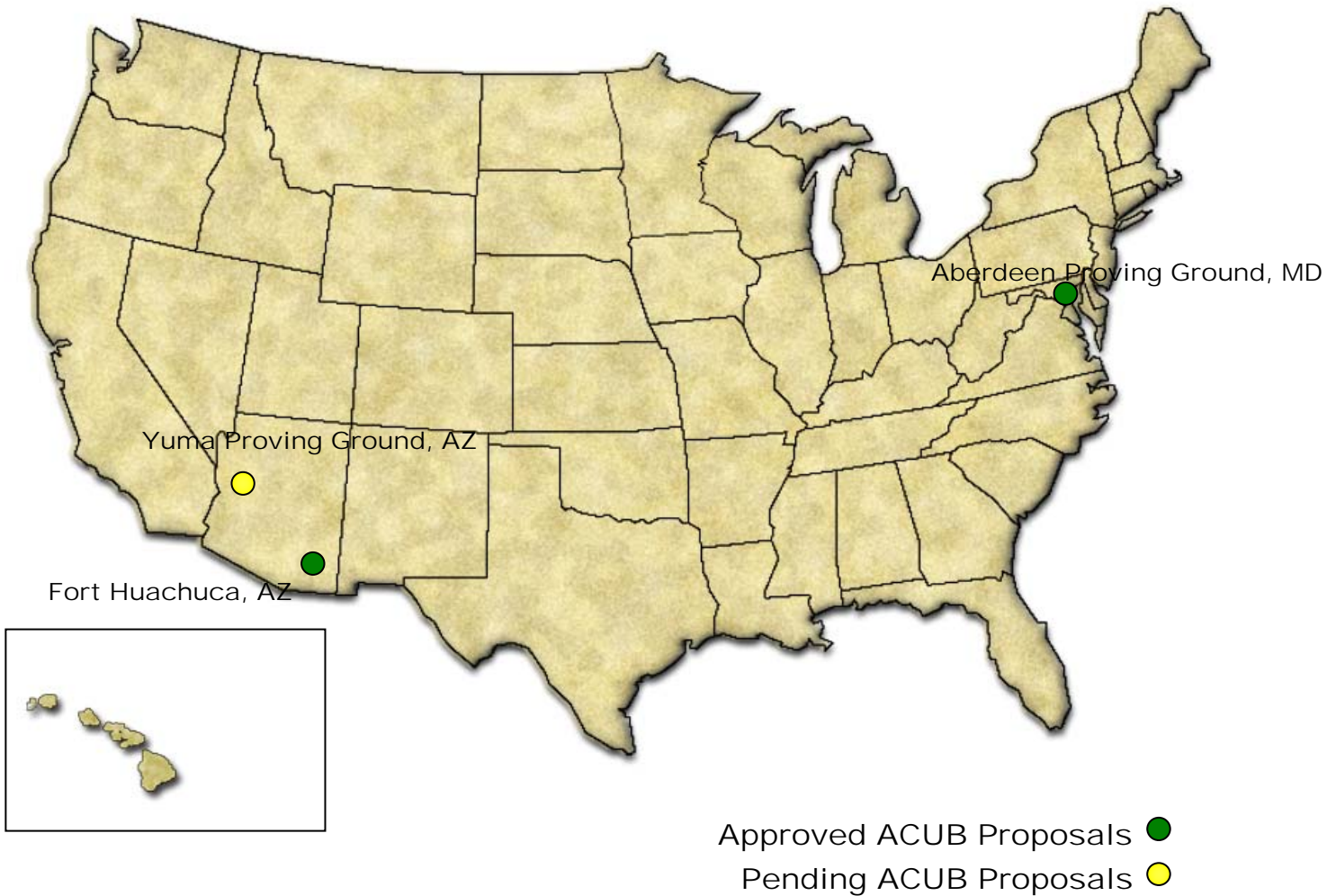


ARMY TEST AND EVALUATION COMMAND (ATEC)





ACUB Testing Installation Status





Aberdeen Proving Ground, MD Churchville Test Area

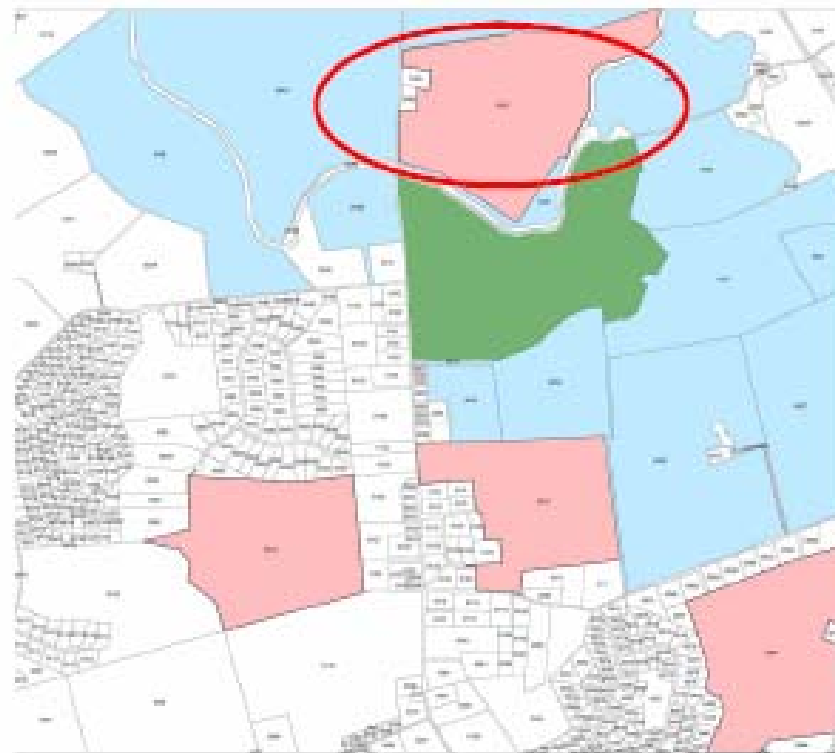


Objective

Protect important testing areas from potential development and to preserve the county's agricultural heritage.

CA partner: Hartford Land Trust

Other partners: Harford County Government and State of Maryland department of natural resources.



Legend

- Confirmed Land Trust
- Most Vulnerable to Development
- Churchville Test Area



Aberdeen Test Center Background

- Aberdeen Test Center (ATC) is tenant at APG and DoD lead for automotive testing for all manned and unmanned wheeled and tracked vehicles
- Churchville Test Area (CTA) is non-contiguous to APG and located in rural, farming area mostly surrounded by permanently-protected agriculture land
- CTA includes 244 acres, 11 miles of test courses with extremely hilly and cross-country terrain at grades of 7-29%
- CTA accommodates minimum test and evaluation training to standard for wheeled and tracked vehicles and is only such facility in the US





Aberdeen Test Center Details

- **163 acres with development rights to subdivide for 11 houses is only remaining adjacent parcel without permanent protection from development**
- **Partner with Harford County and Harford Land Trust to purchase development rights and ensure continued agriculture use**
- **25% partner contribution for total Army cost of \$980K**





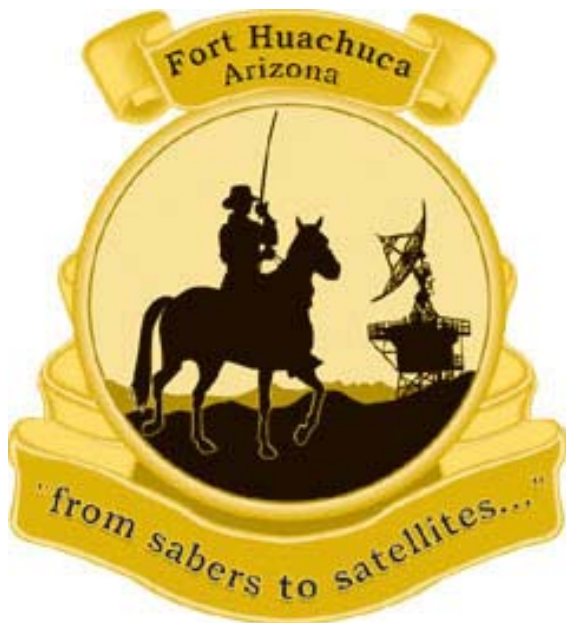
ATC ACUB Benefits

- All land surrounding CTA will be permanently protected from development
- Protect water quality from increased runoff and sedimentation
- Premier military wheeled and track vehicle testing site will remain critical DoD asset with no time-of-day or location restrictions on testing



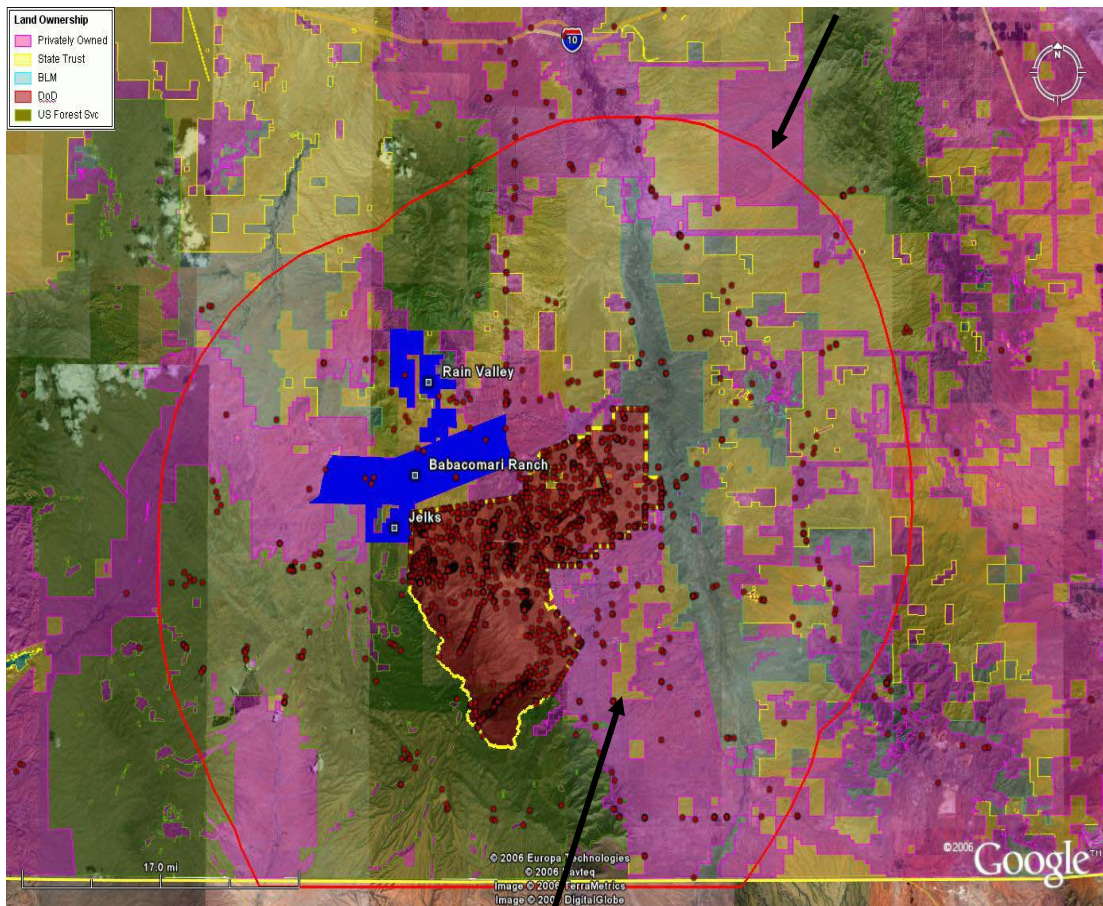
Fort Huachuca, AZ

Coordination Zone required area



Objective

- prevent high density land development:
- Avert increasing threat from frequency interference.
- Encumber land to prevent uses for commercial telecommunications and other EM spectrum users
- AZ Military Installation Fund
- Santa Cruz and Cochise County
- AZ Open Land Trust



Test Range 'minimize sources' requirement



Test Missions

- **Electronic Proving Ground (EPG):**
 - UAV testing in the isolated frequency environment of R2303 airspace
 - communications equipment, networks and end items for C4 equipment loading to ensure performance to standards
- **Joint Interoperability Test Command (JITC)**
 - Ensures joint Federal interoperability for C4ISR products
 - information technology/national security systems
- **Intelligence and Electronic Warfare (IEWTD)**
 - All Army operational testing on C4ISR and CIED systems and rapid initiatives
 - Active open-air jamming of military and commercial frequencies and GPS



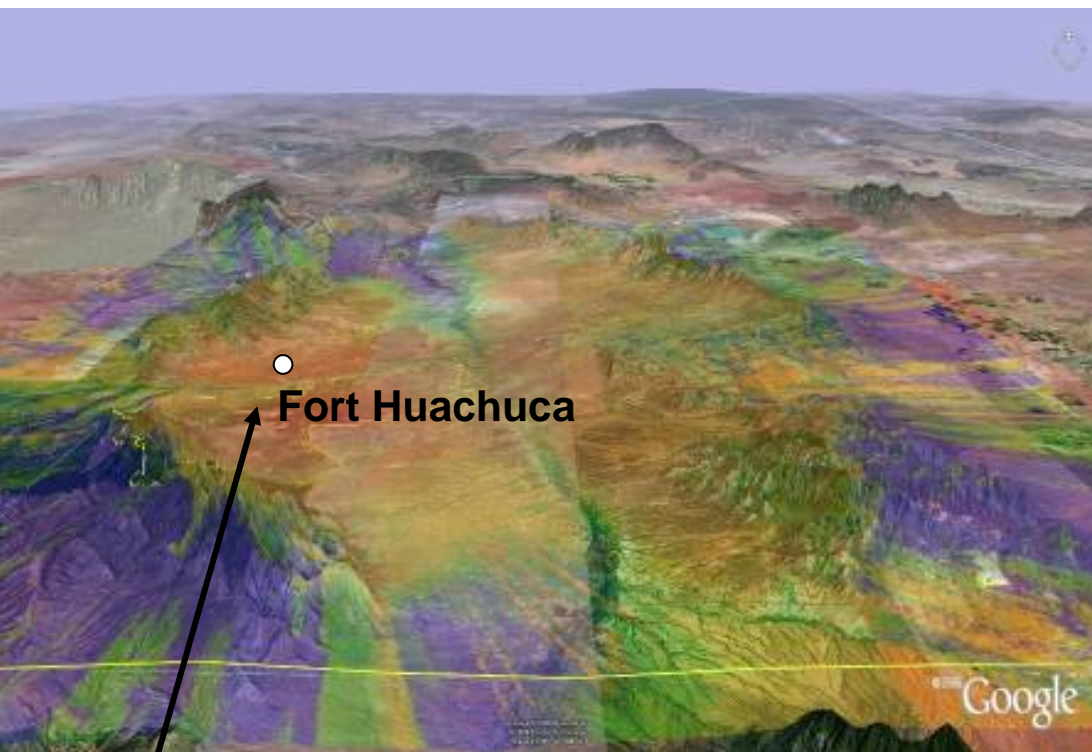
Huachuca ACUB Purpose

- **Primary (Restricted airspace to protect Testing mission):**
 - Protect up to 50,000 acres of land under R2303 airspace used for Army UAS testing
 - Prevent high density land development that results in frequency encroachment
 - Protect critical EM spectrum required to manage 'background' electronic noise, light, line of site, and surveyed position network
- **Secondary (Meet T&E requirements):**
 - Leverage partner funds and avoid restrictions due to Huachuca water umbel in the Upper San Pedro basin





Irreplaceable and Non-replicable Assets



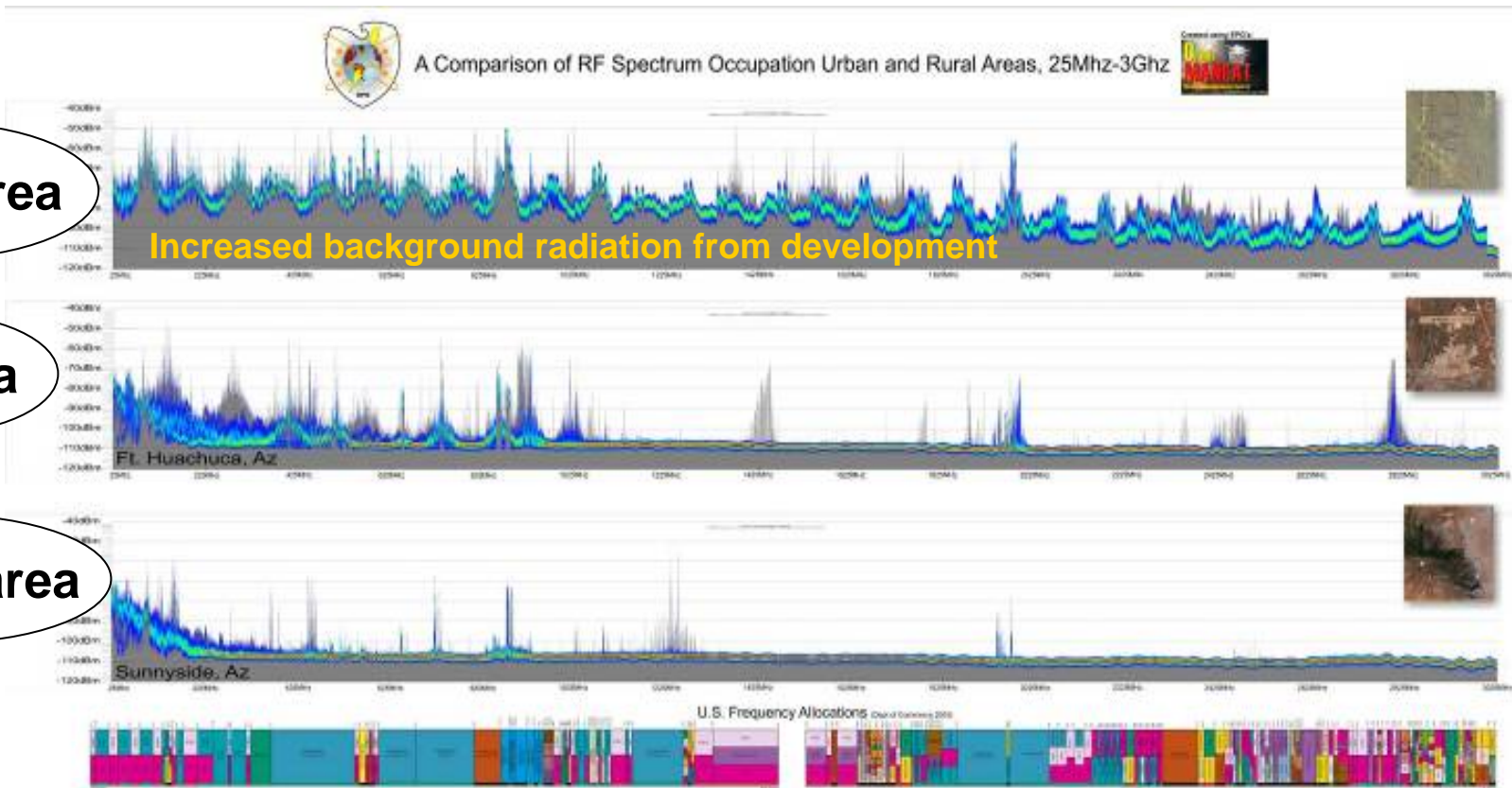
Unique natural topography and geology protects EM spectrum and shields developed areas from jamming activities

Increased residential and commercial development migrating inside the bowl encroaches on EM spectrum

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increased development → increased frequencies → reduced testing capability

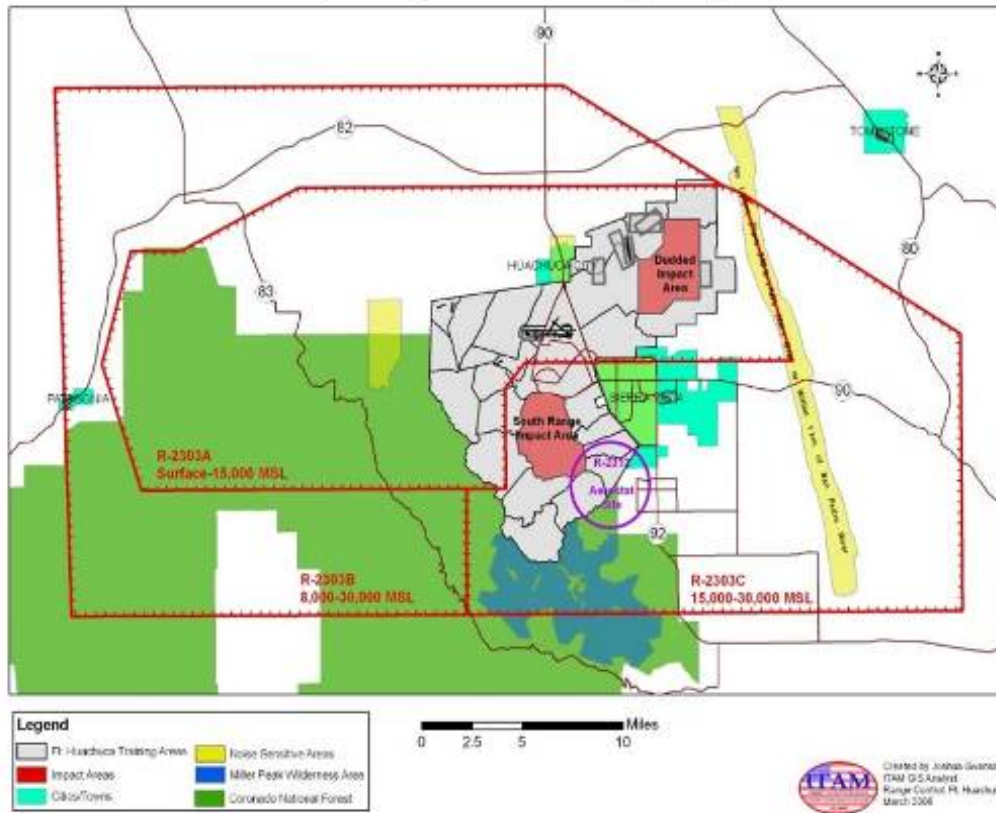


- AZ laws favor development and hinder local control
- High density development means fewer commercial technology frequencies for use with testing



Restricted Airspace to Protect Testing Mission

Libby Army Airfield Military Airspace



Mission use in the airspace

- UAV Testing
- High hazard laser testing
- SEMA/Guardrail
- DHS Predator
- Any high-hazard test mission (Hunter Stand-off Killer Team, PROPHET)
- AZANG Predator B (2011)



Impacts without ACUB

- Degradation of isolated radio frequency environment for electronic testing
- Human health and safety from inadvertent UAV landings
- Frequency encroachment from and on local community
- Increased land values and massive subdivision
- ESA requirements on and off post from the 1997 listing of the Huachuca water umbel in the San Pedro River watershed
- Missed opportunities to receive strong partnership contributions



Bottom Line

- **Fort Huachuca has irreplaceable and non-replicable testing assets**
- **High density land development threatens the testing environment**
- **Available electromagnetic spectrum use must be maintained for rapid turnaround for mission critical warfighter support**

'The battlefield should not be the testing ground'



A new way of thinking for the military



"There are two things that interest me - the relationship of people to each other and the relationship of people to land."

~ Aldo Leopold (Sand County Almanac)

