

SENTINEL LANDSCAPES



How Sentinel Landscape Partnerships Protect Community Water Resources

Association of Defense
Communities Installation
Innovation Forum

October 29, 2024



Military Resilience at a Landscape Level

Encroachment threats that impact DOD installations:

- ★ Incompatible development
- ★ Endangered species restrictions caused by habitat loss
- ★ Climate resilience impacts (wildfire, flooding, extreme weather)

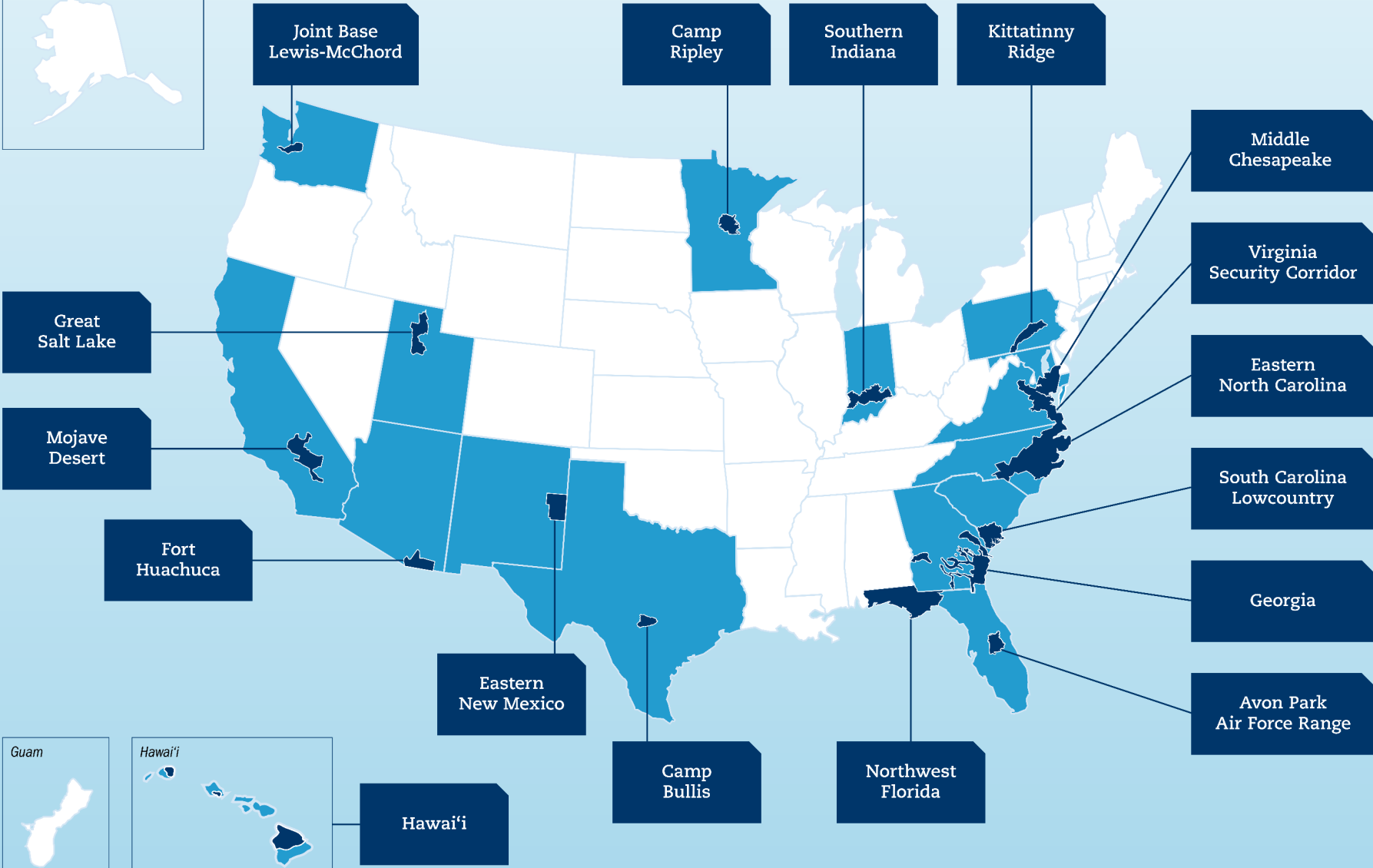
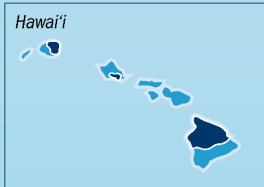


Camp Bullis Sentinel Landscape, Texas

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FEMA





DOD Office of Local Defense Community Cooperation

- Compatible Use Plans and Military Installation Resilience Reviews
- Defense Community Infrastructure Program



DOD Readiness and Environmental Protection Integration Program*



DOD Natural Resources Program

- Legacy Program



USFWS*

- North American Wetlands Conservation Act Grants
- Migratory Bird Conservation Fund



National Park Service

- Land and Water Conservation Fund



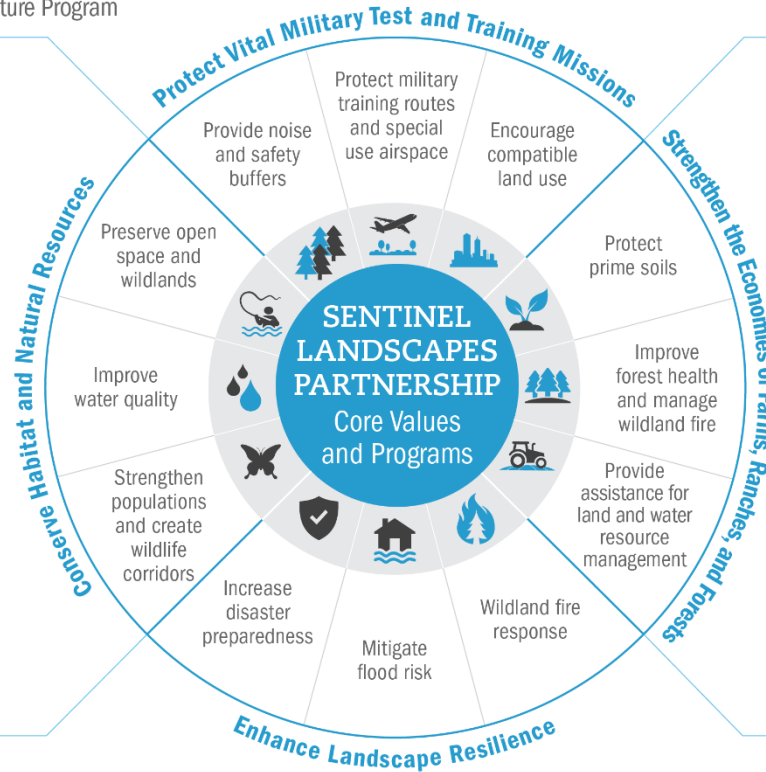
Bureau of Land Management

- National Conservation Areas



NOAA

- Coastal Estuarine Land Conservation Program



USDA Farm Service Agency

- Conservation Reserve Program



USFS State and Private Forestry*

- Forest Legacy Program
- Forest Stewardship Program
- Land and Water Conservation Fund
- Community Forest Program



USDA Natural Resources Conservation Service*

- Agricultural Conservation Easement Program
- Conservation Stewardship Program
- Environmental Quality Incentives Program
- Regional Conservation Partnership Program



FEMA

FEMA*

- Hazard Mitigation Grant Program (HMGP)
- Flood Mitigation Assistance Program
- Building Resilient Infrastructure & Communities Program
- HMGP Post Fire Grant
- Pre-Disaster Mitigation Program

* Denotes Federal Coordinating Committee Member

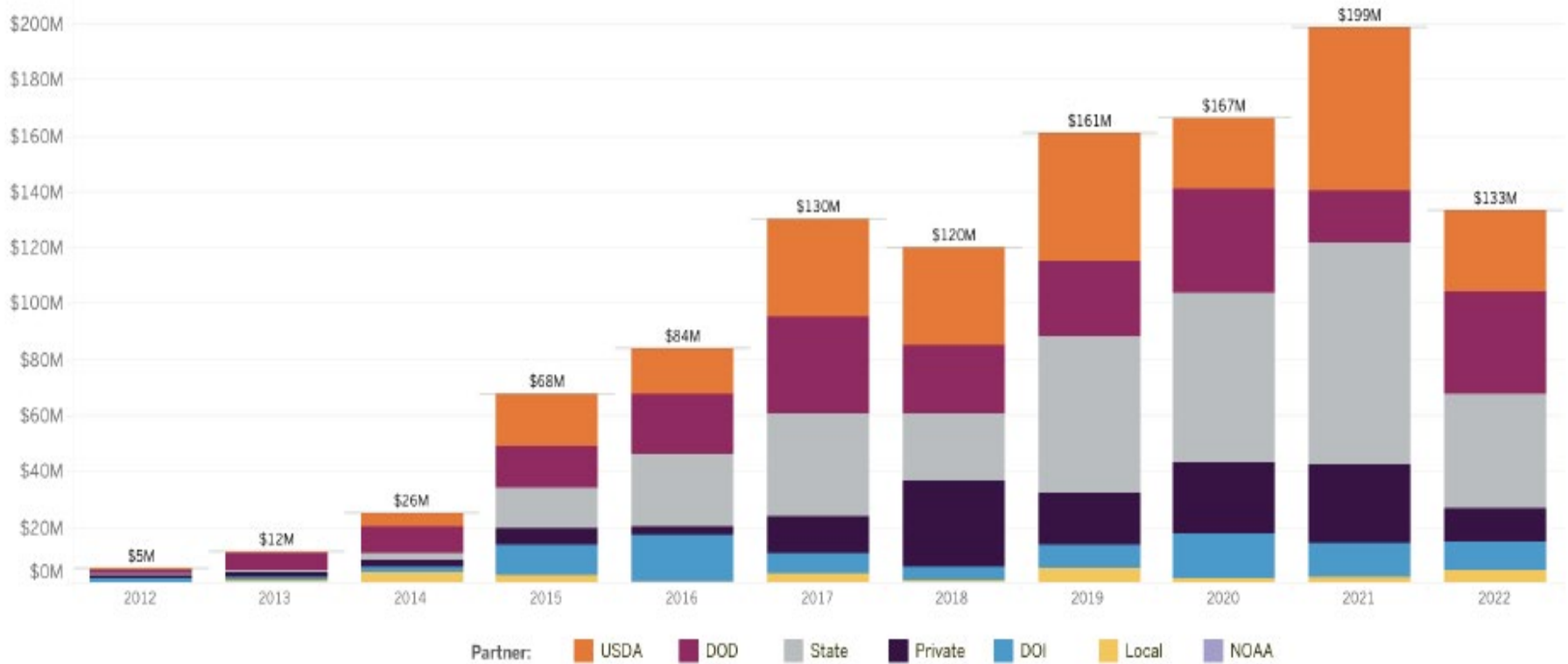
In 2018, the National Defense Authorization Act (NDAA) introduced language that formally recognized the Sentinel Landscapes Partnership in statute. This language was further amended in the FY 2022 & 2024 NDAA.

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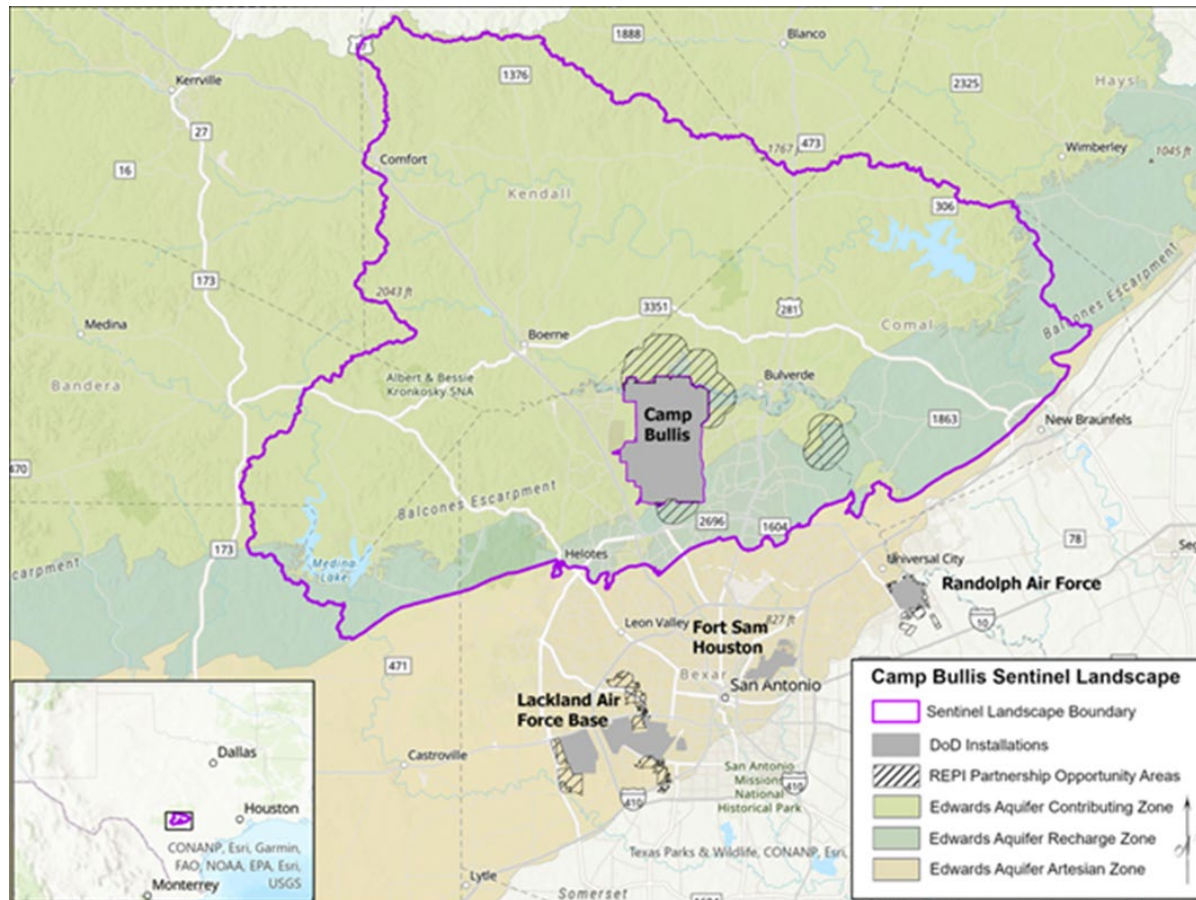
FEMA

Fiscal Year 2022 Accomplishments



Camp Bullis Sentinel Landscape Partnership

Enhancing Drought and Flood Resilience



Drought Resilience

- Protecting known aquifer recharge areas
- Groundwater study
- Enhancing soil health & groundwater infiltration

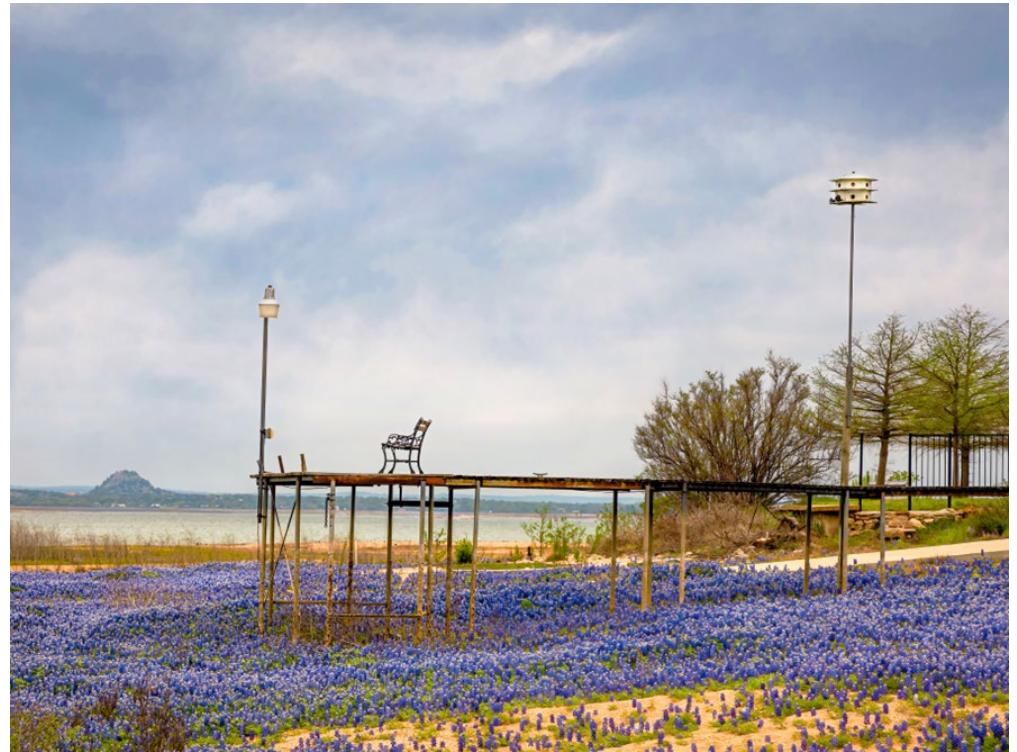
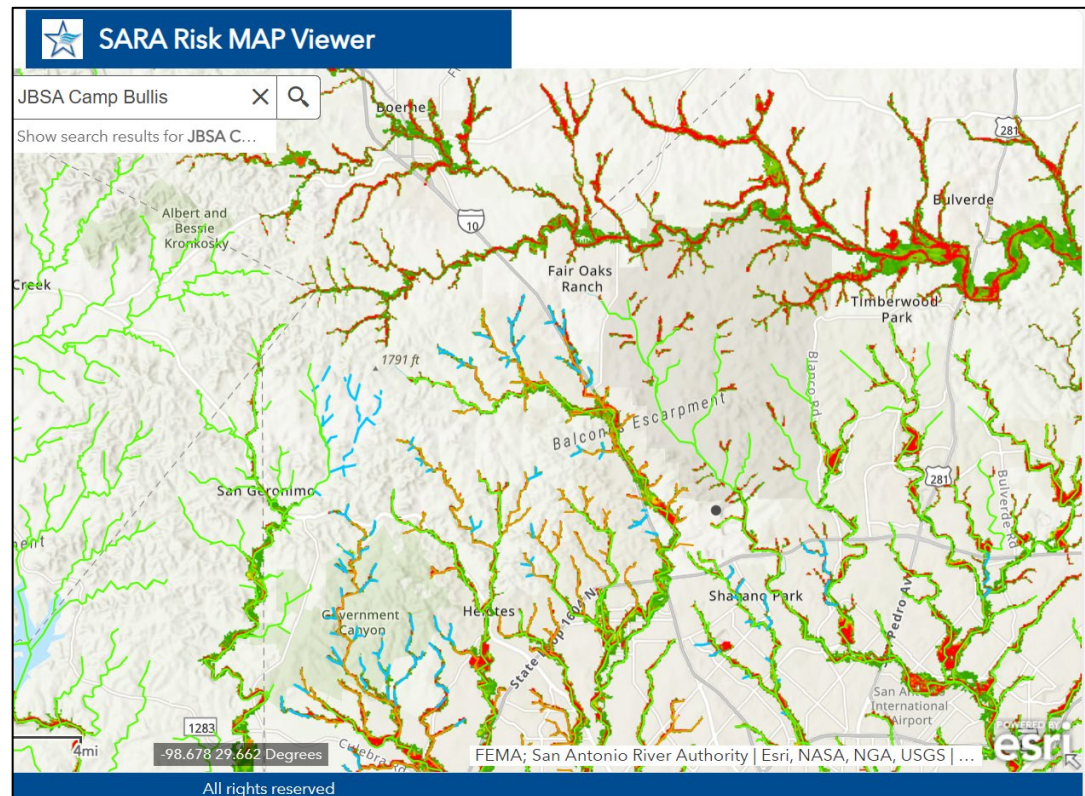


Photo by Carolyn Whiteside

Flood Resilience in Flash Flood Alley

- Leveraging existing planning processes
- Proposed study of Cibolo Creek
- Enhancing soil health & groundwater infiltration



Slowing & Sinking Water in a Private Lands State



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**Eastern New Mexico
Sentinel Landscape Partnership:
*Protecting Community
Water Resources***

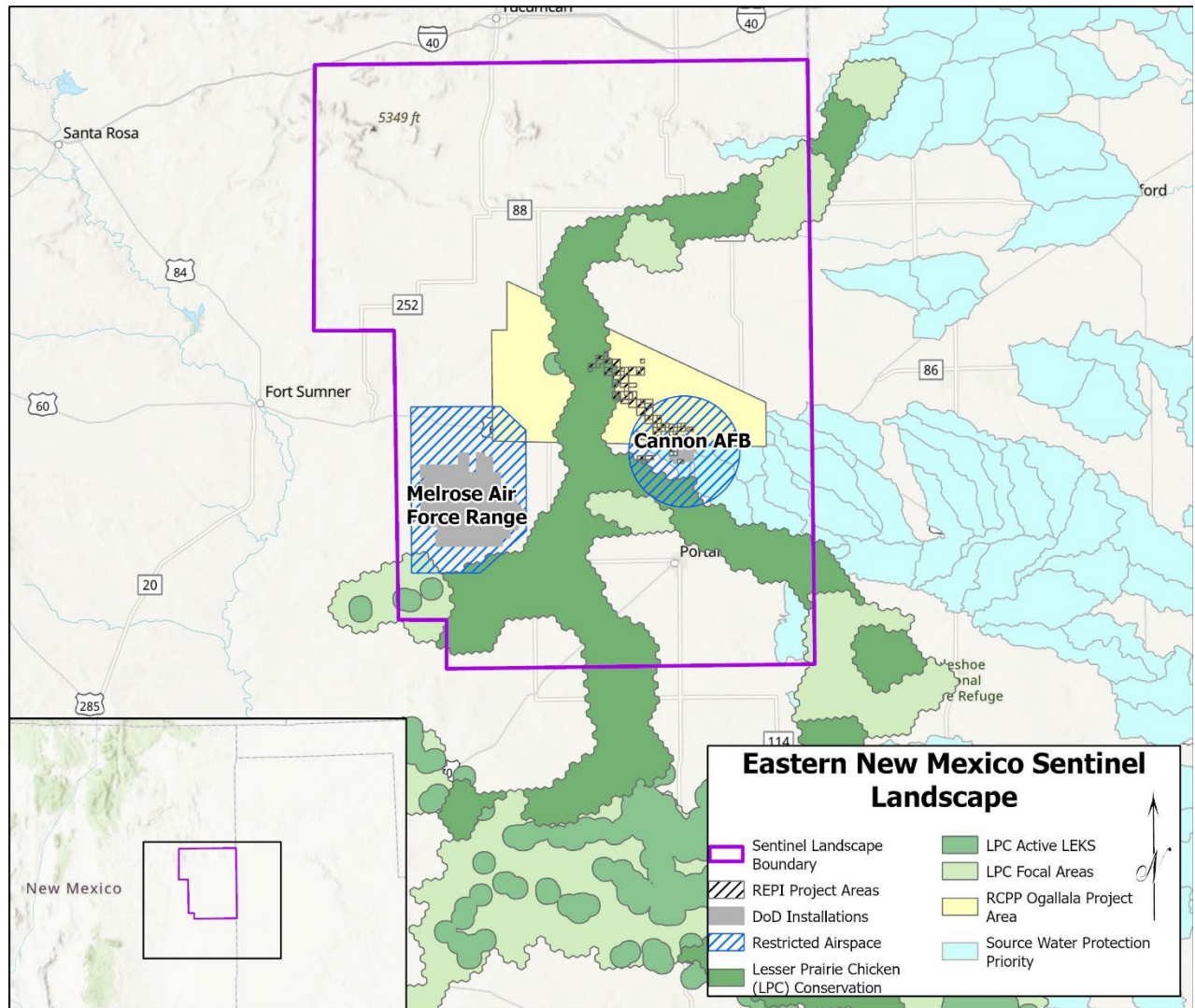
ADC Installation Innovation Forum 2024

**Dr. Ladona K. Clayton, ENMSL POC
Executive Director, Ogallala Land & Water Conservancy**

**Anchoring
Installations:
Cannon AFB
Melrose AFB**

**2,446,412 acres
3 counties
27 partners**

**Water Scarcity
is the primary
encroachment
threat**



EASTERN NEW MEXICO SENTINEL LANDSCAPE

- Data driven, innovative approach to conserve GROUNDWATER
 - 2012 AFSOC Trinity Research Study & Analysis
 - 2016 – 2023 Aquifer Mapping Research Studies (NM Tech)
- **PRIVATE LANDOWNERS: IRRIGATION FARMERS**
- **KEY FUNDERS:**
 - *Department of Defense/REPI Program (OSD + USAF)
 - *Natural Resources Conservation Service (RCPP - NM Assoc. of Conservation Districts)
 - *State of New Mexico
 - City of Clovis, Curry County, Cannon AFB (USAF), and Central Curry Soil & Water Conservation District

EASTERN NEW MEXICO SENTINEL LANDSCAPE

MODEL

SHORT-TERM TOOL
3-Year Water Rights
Lease Agreements
9 of 17 irrigation farmers

Appraised value of the groundwater
x
Metered gallons per minute of
annual water production

LONG-TERM TOOL
Perpetual Conservation Easements

80% of groundwater conserved
20% of water to landowner for
domestic/livestock and to sell

12,855 acres currently approved
for easements

11.916 billion gallons or
36,570 ac. ft. currently saved

For more information:

www.sentinellandscapes.org

Andy Porth

Director of REPI Projects and Resources

andrew.m.porth.civ@mail.mil

Daniel Oppenheimer

Camp Bullis Sentinel Landscape Coordinator

Daniel@hillcountryalliance.org

Ladona Clayton

Executive Director, Ogallala Land & Water

Conservancy

ladona.clayton@ogalwc.org

Sign up for the
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Partnership Listserv:

