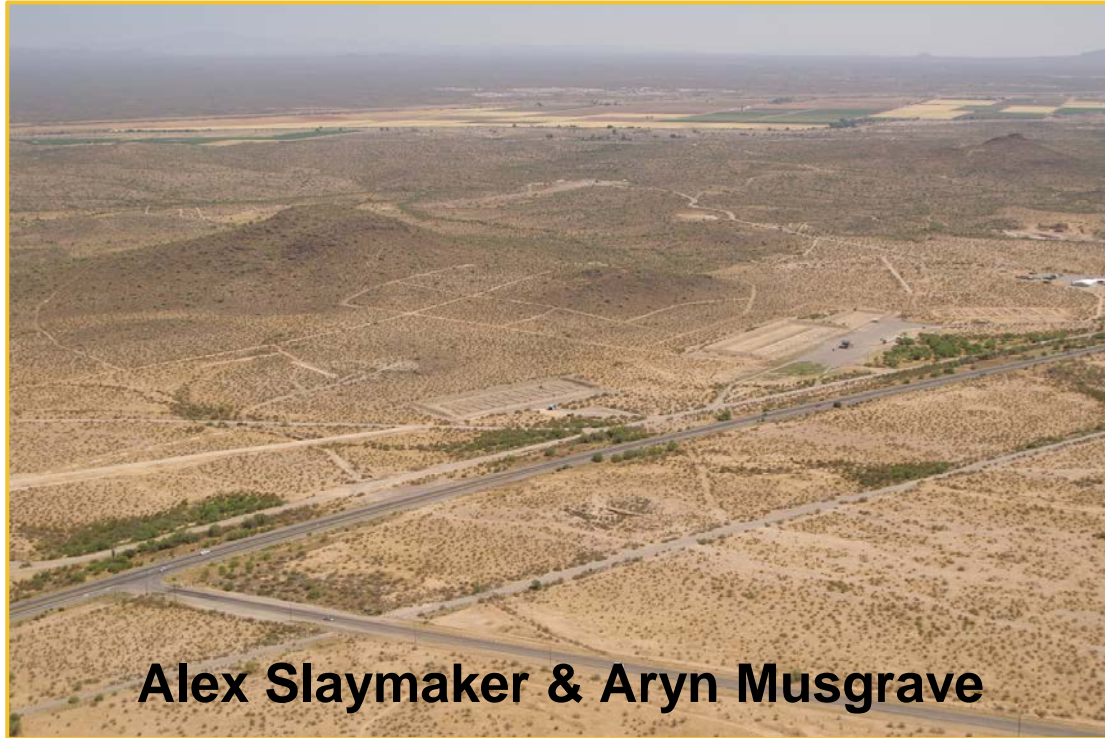


Planning for a Resilient Future:

A Climate Vulnerability Assessment for the Florence Military Reservation



Alex Slaymaker & Aryn Musgrave



CONTEXT



- Executive Order: boost resilience to future climate impacts
- Climate risks:
 - threat multiplier, decrease military readiness, endanger mission success
- Climate impacts:
 - troops, civilians, flora, fauna

AZARNG MISSION:

Ensure national security by responding 'to domestic emergencies, combat missions, counterdrug efforts, reconstruction missions and more-all with equal speed, strength and efficiency'

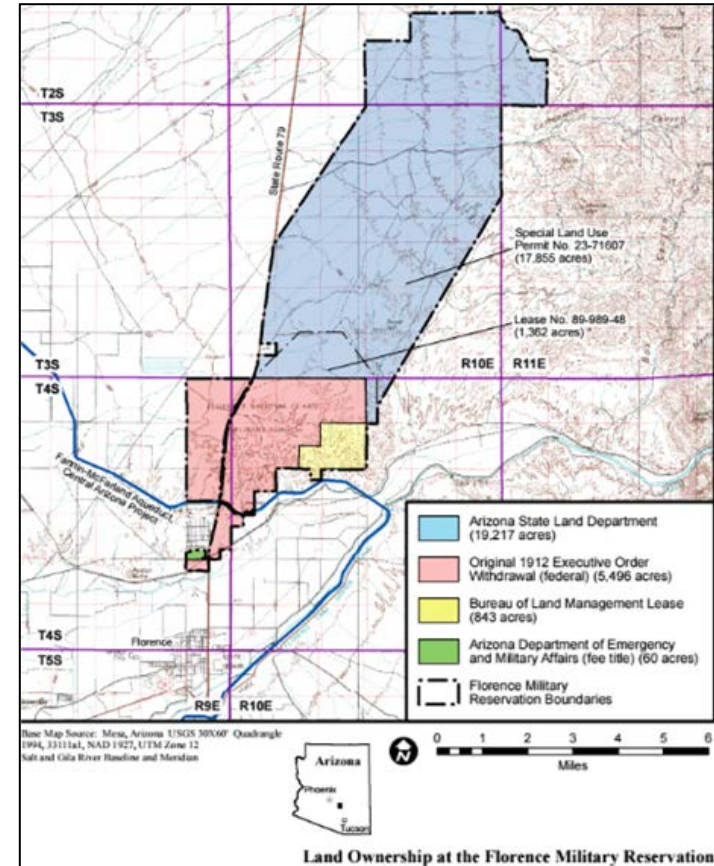
REPORT QUESTIONS:

- What climatic impacts should FMR expect and plan for?
- How will these changes impact current operations?
- What strategies should be implemented now to mitigate potential future impacts?



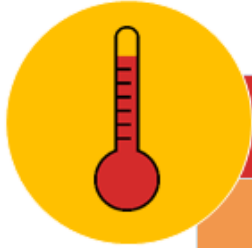
WELCOME TO FMR

- Training grounds for troops, police, etc.
- 19,246 acres: Federal, state owned, & leased
 - bordered by BLM & State Trust Lands, private
- 40 miles SE of Phoenix
- Sonoran desert ecoregion



MULTI-SCALAR IMPACTS

Southwest Implications of Climate Change Summary



Temperature Changes

INCREASED PROBABILITY OF:

- * Desertification
- * Fire frequency and intensity
- * Transmitting infectious diseases
- * Agricultural failures
- * Heat-related illness/ fatigue

(Karl, Melillo, & Peterson, 2009)



Precipitation Changes

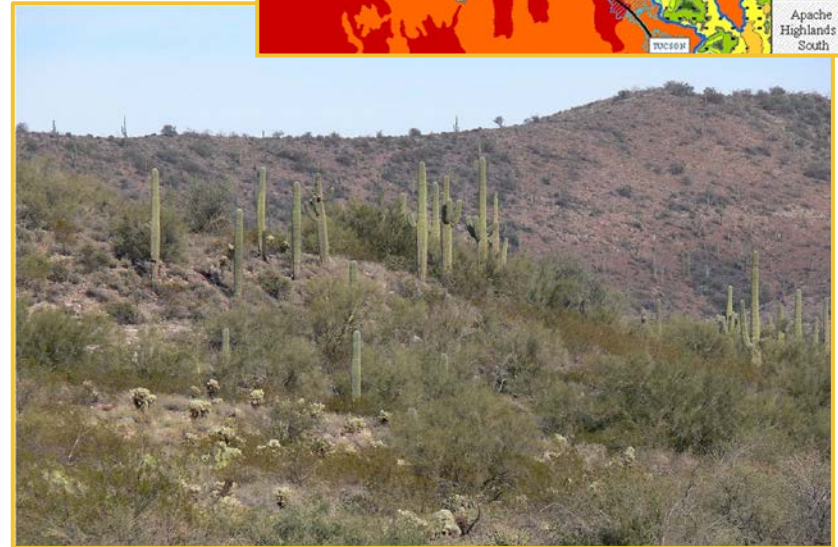
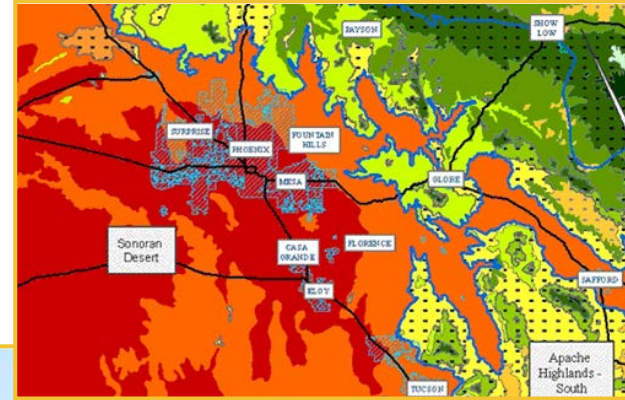
INCREASED PROBABILITY OF:

- * Droughts
- * Damage to infrastructure
- * Death due to flash floods
- * Water insecurity
- * Unhealthy native ecosystems

(Karl, Melillo, & Peterson, 2009)

MULTI-SCALAR IMPACTS

- Sonoran Ecoregion
 - less precipitation
 - reduced soil moisture
 - strong winds
 - haboobs and monsoons
 - extreme heat



IMPLICATIONS & ADAPTATIONS

- Proactive wildlife management
- Compliance with Environmental Regulations
- Cultural Resource Preservation
- Impacts on biogeochemical cycles
- Risks for infrastructure



DoD land is **10x as biodiverse** as any other department in US



TRAINING IMPACTS

- Goals: ensure future compliance + ops
- Actions:
 - Watershed stewardship analysis
 - Resilient shade/ energy structures
 - Scenario development: encroachment



NEXT STEPS

- Stakeholder engagement on risks & opportunities
- Start discussions with state/ local landowners
- Launch deeper vulnerability investigation
 - Situation in constant flux
- Act strategically to boost resilience



THANK YOU, QUESTIONS?

