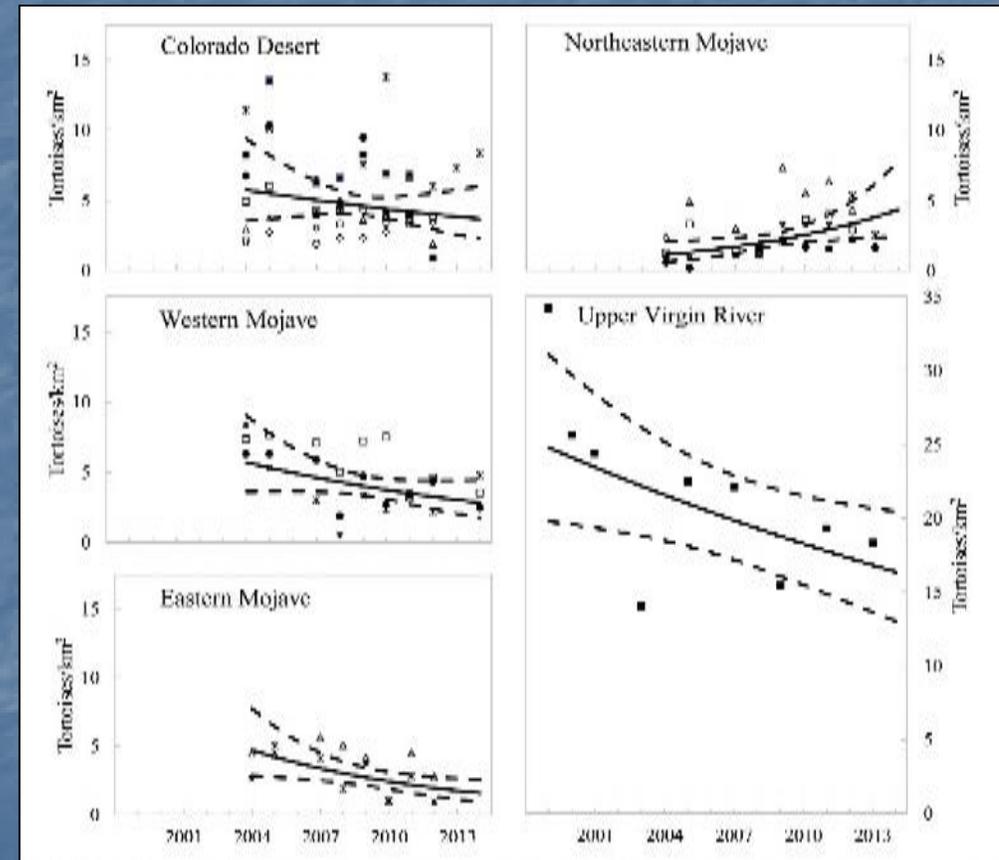
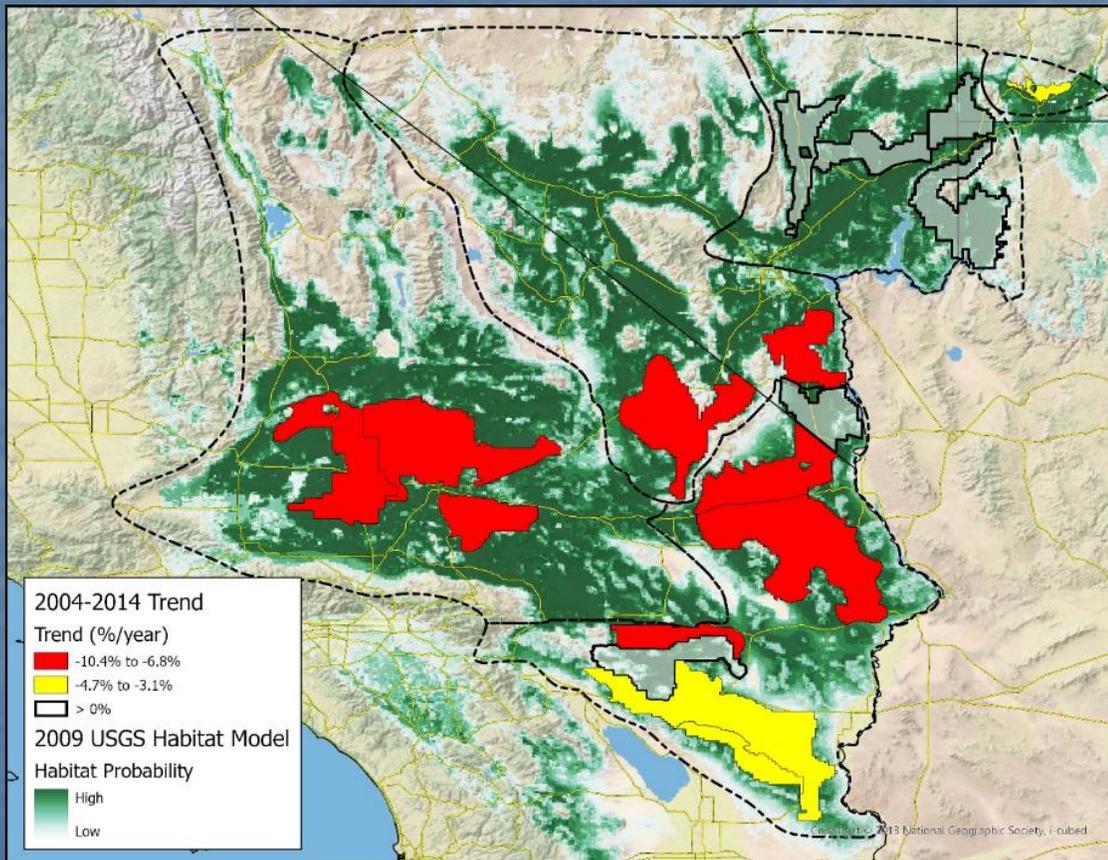


The State of the Mojave Desert Tortoise



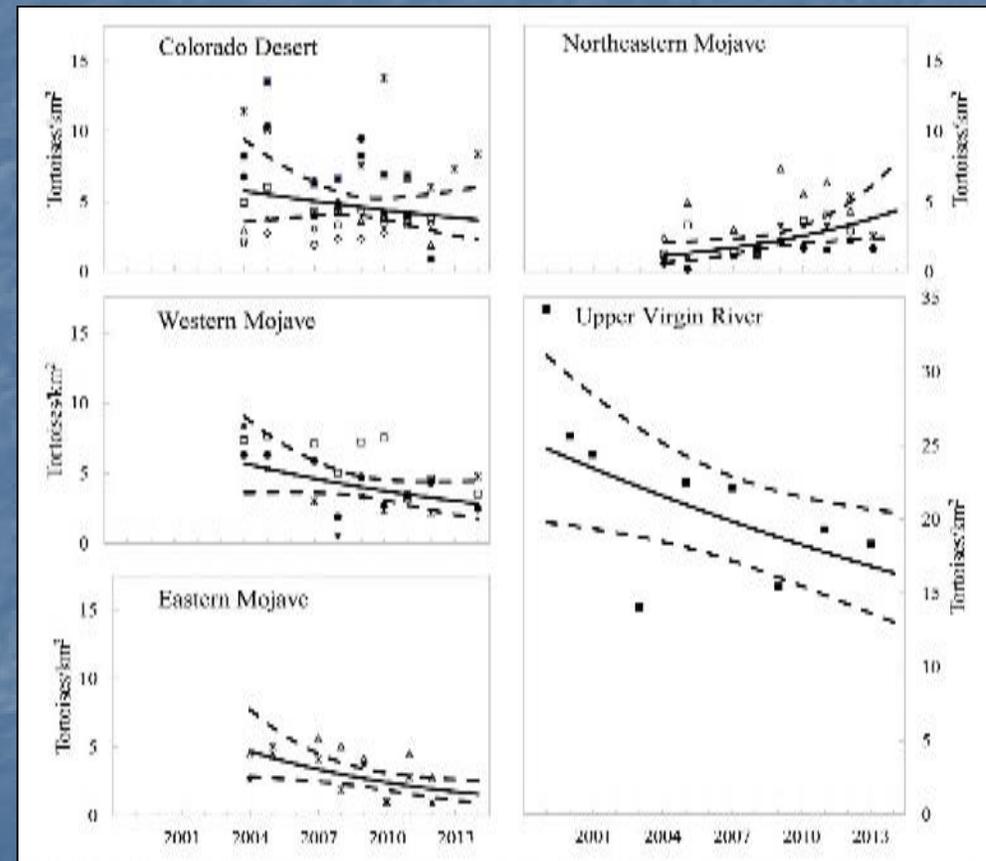
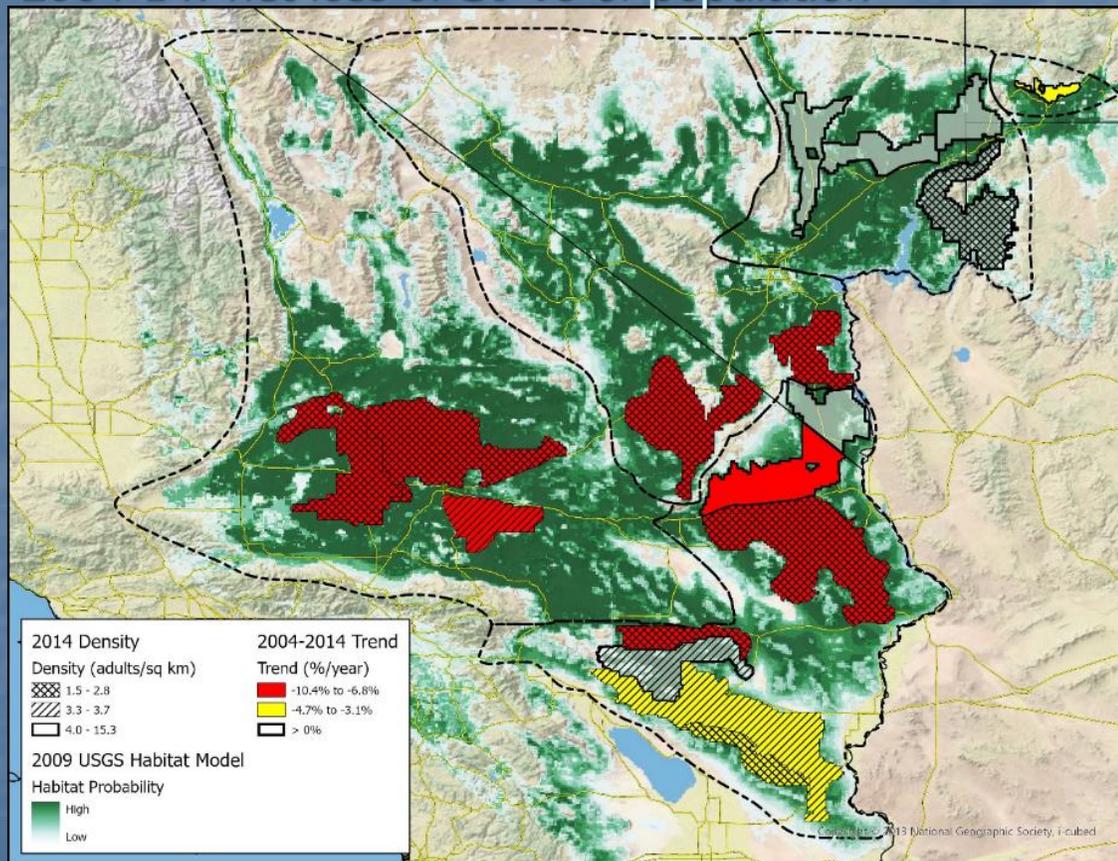
The negative population trends in most of the TCAs for Mojave Desert Tortoises indicate that this species is on the path to extinction under current conditions (Allison and McLuckie 2018).



The negative population trends in most of the TCAs for Mojave Desert Tortoises indicate that this species is on the path to extinction under current conditions (Allison and McLuckie 2018).



2004-14: net loss of **37%** of population





RANGE-WIDE PRIORITIES

U.S. Fish & Wildlife Service

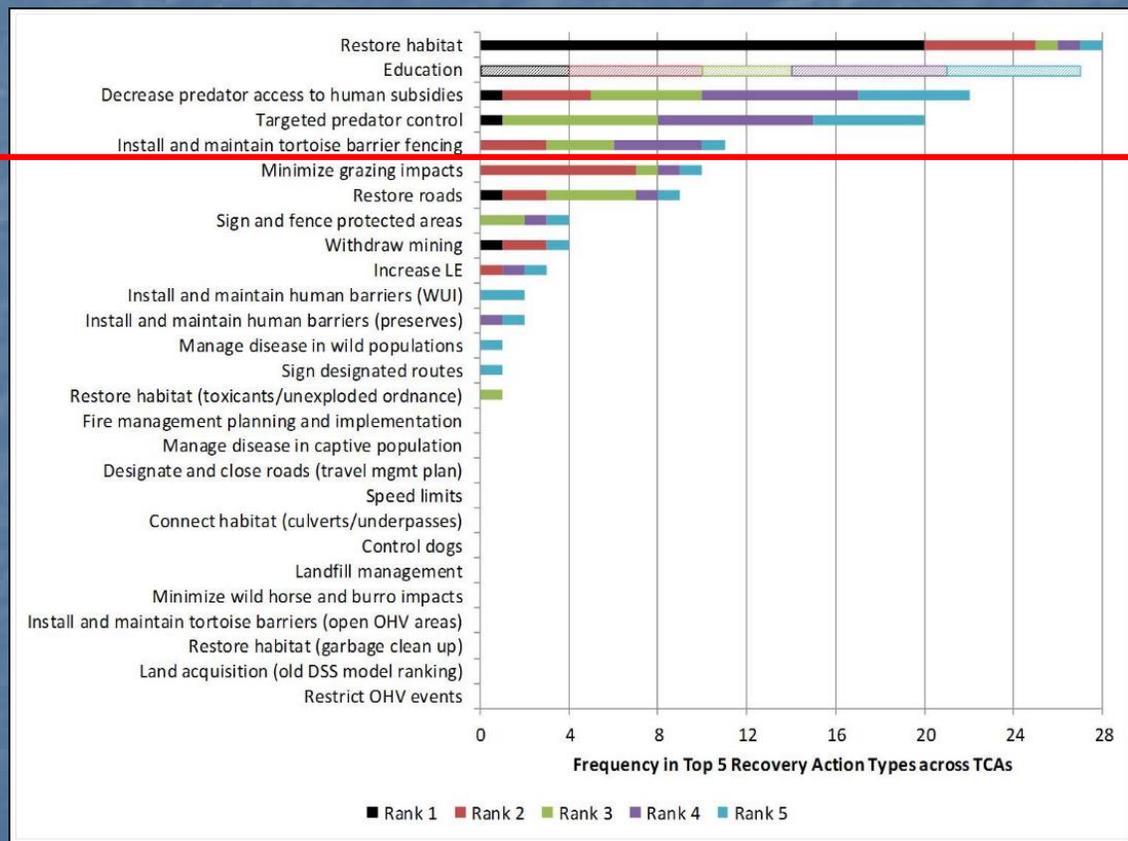
Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*)



©Debbie Caldwell



MOG prioritized recovery actions in 2015



- Habitat restoration
 - Fire management
- Decrease predator subsidies
- Targeted predator control
- Tortoise barrier fencing
- Education
- Progress
- Obstacles

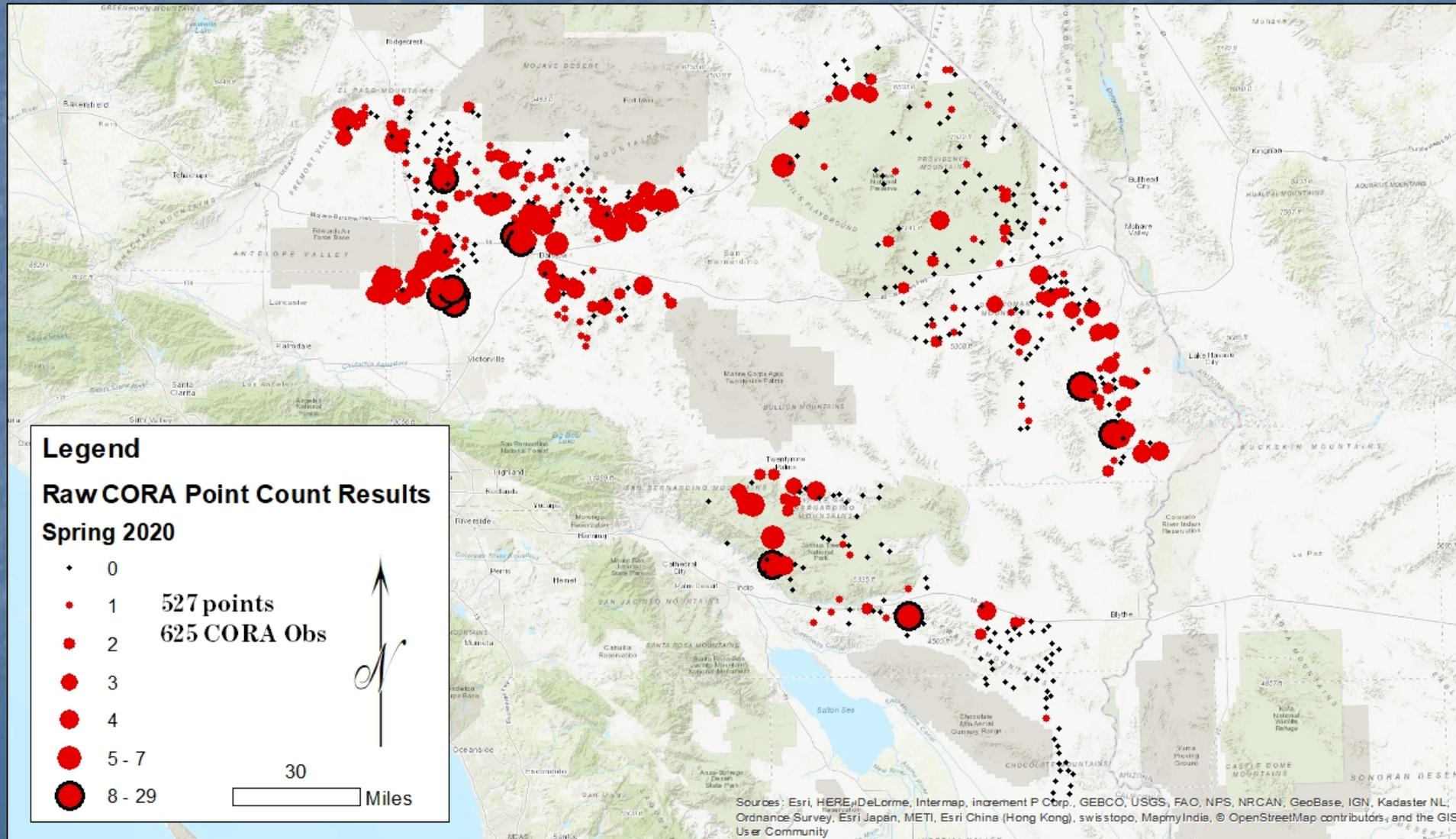
Many habitat restoration projects are being implemented



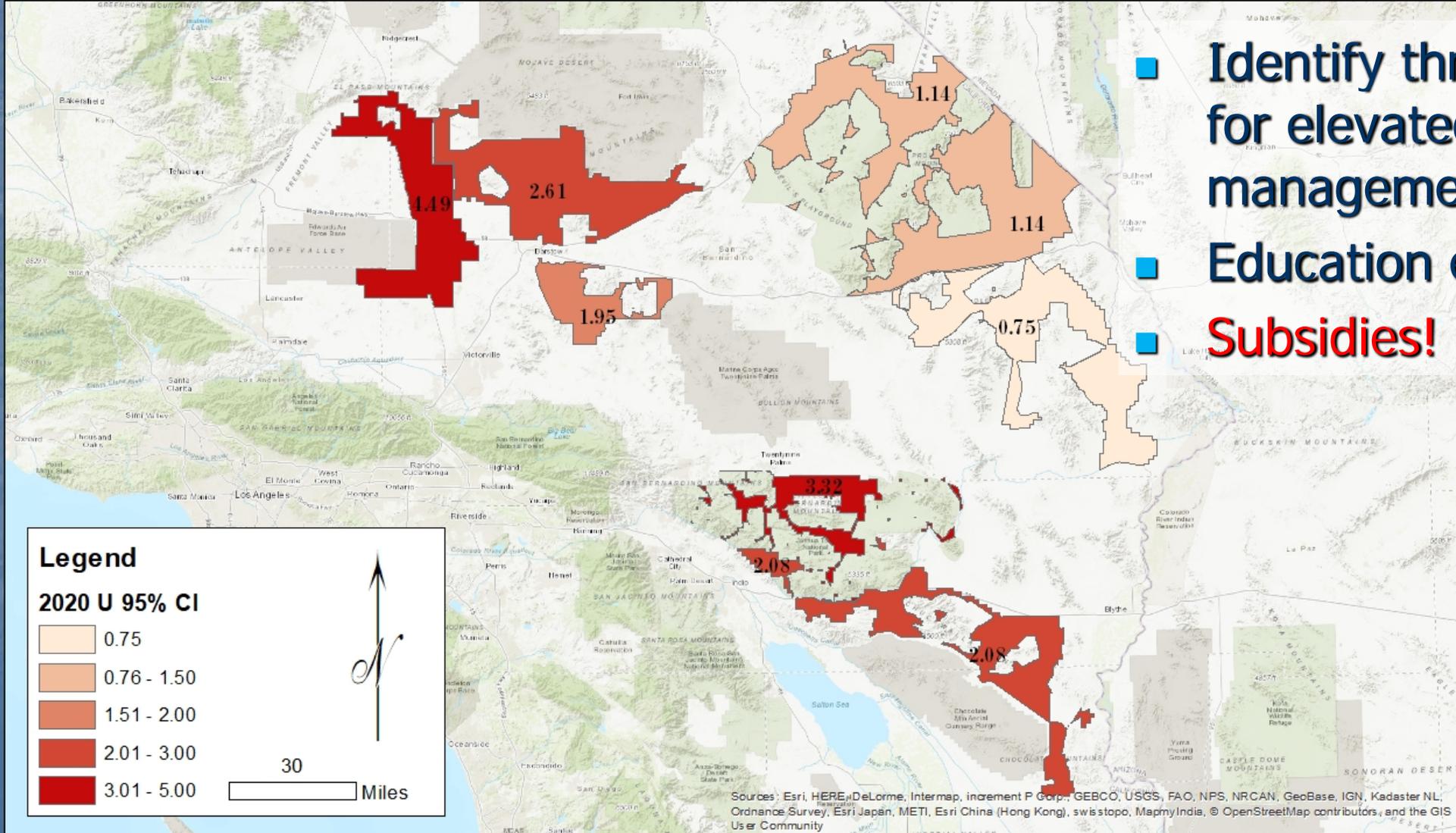
- Questions re: effectiveness of different methods
 - USGS/BLM work in West Mojave
 - Clark County symposium
- Priorities for wide-ranging, ubiquitous need?
 - Collaborative proposal to develop prioritization tool
- Native seed sources
- Durability



We are more effectively assessing impacts of ravens



We are more effectively assessing impacts of ravens



- Identify thresholds for elevated management
- Education efforts
- **Subsidies!**

Legend

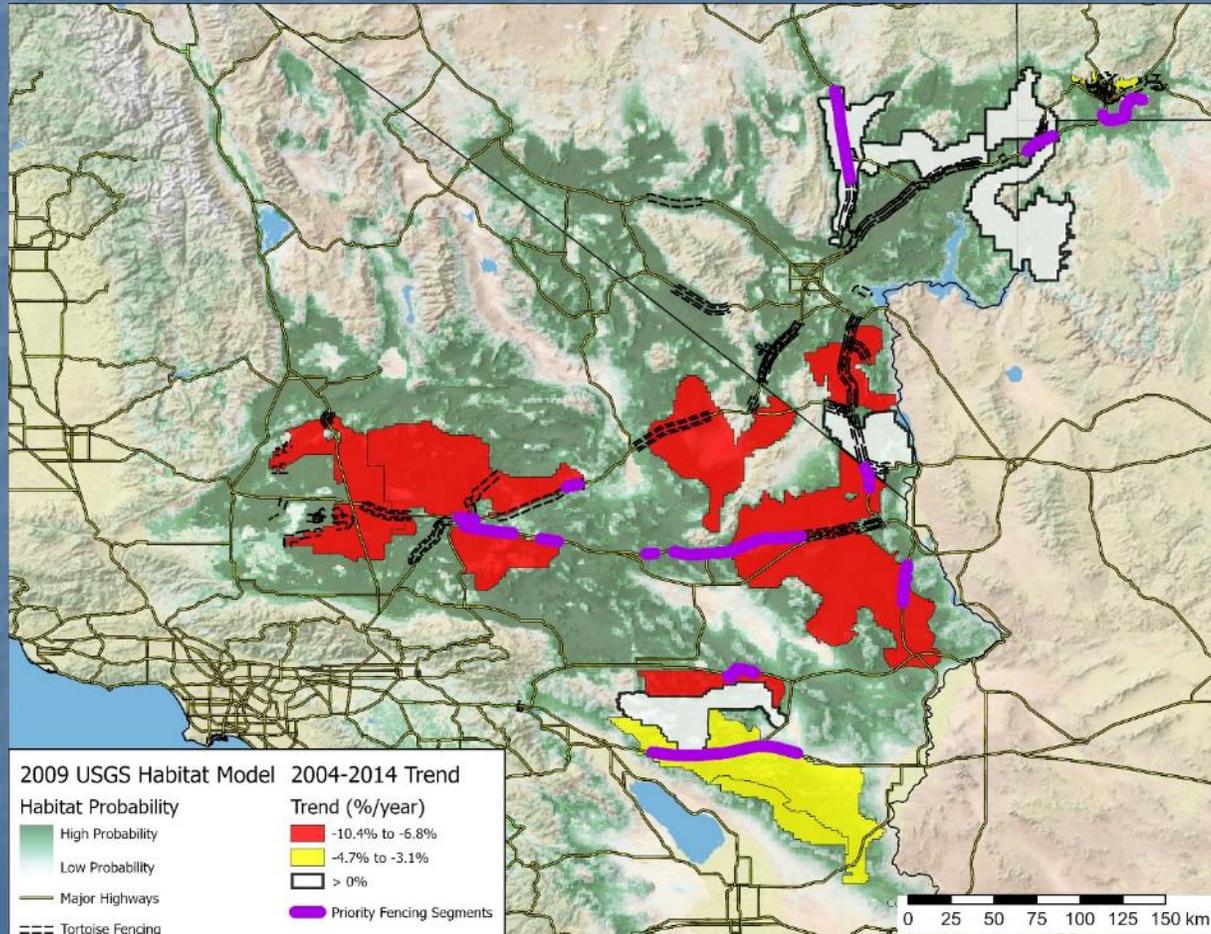
2020 U 95% CI

0.75
0.76 - 1.50
1.51 - 2.00
2.01 - 3.00
3.01 - 5.00

30 Miles

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

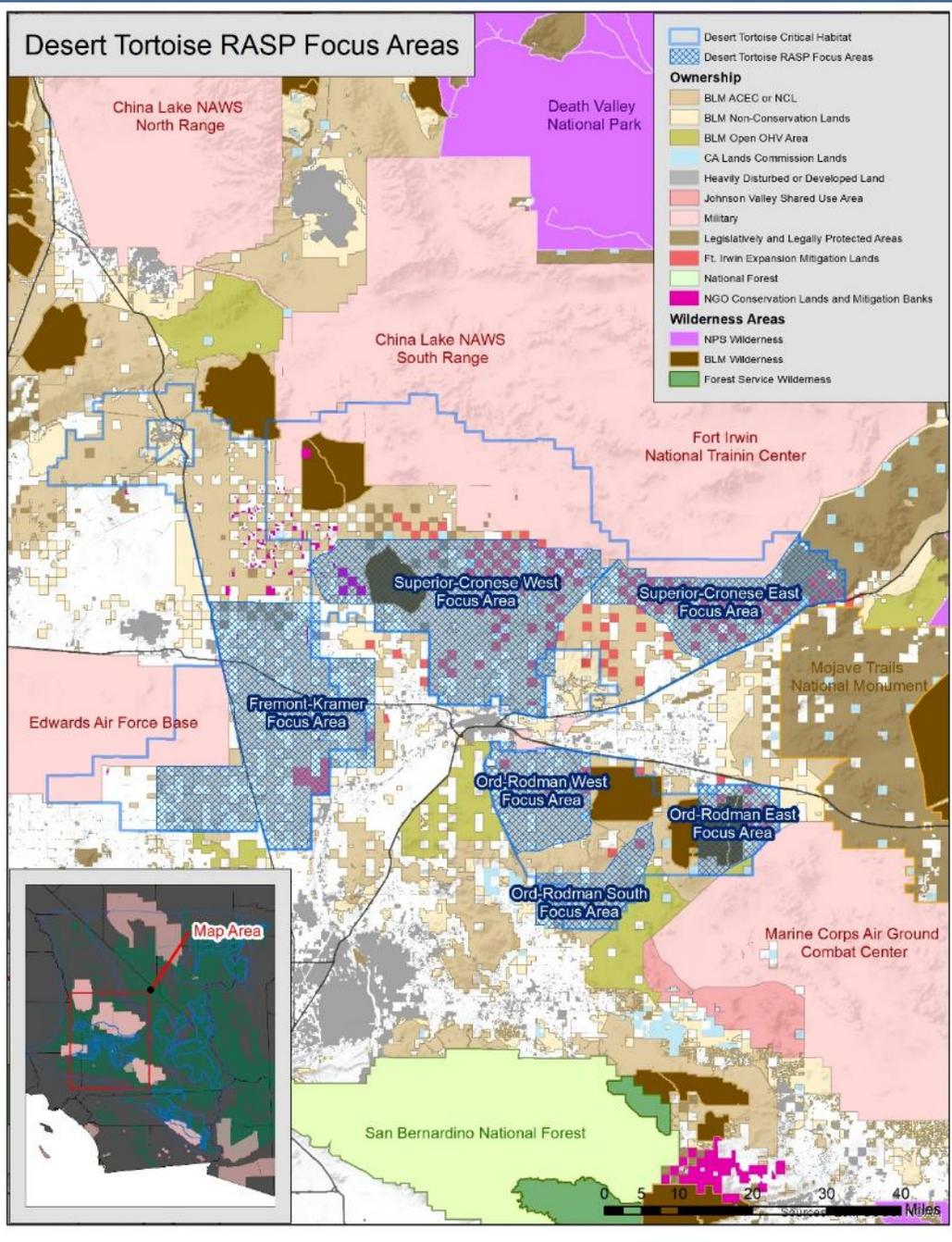
Tortoise exclusion fencing priorities have been identified



- Transportation Ecology Workshop
- Regulatory hurdles
- Ability to use mitigation funds to install
- DOT ROW authorization vs maintenance responsibility



LARGE-SCALE RECOVERY INITIATIVES



Recovery and Sustainment Partnership

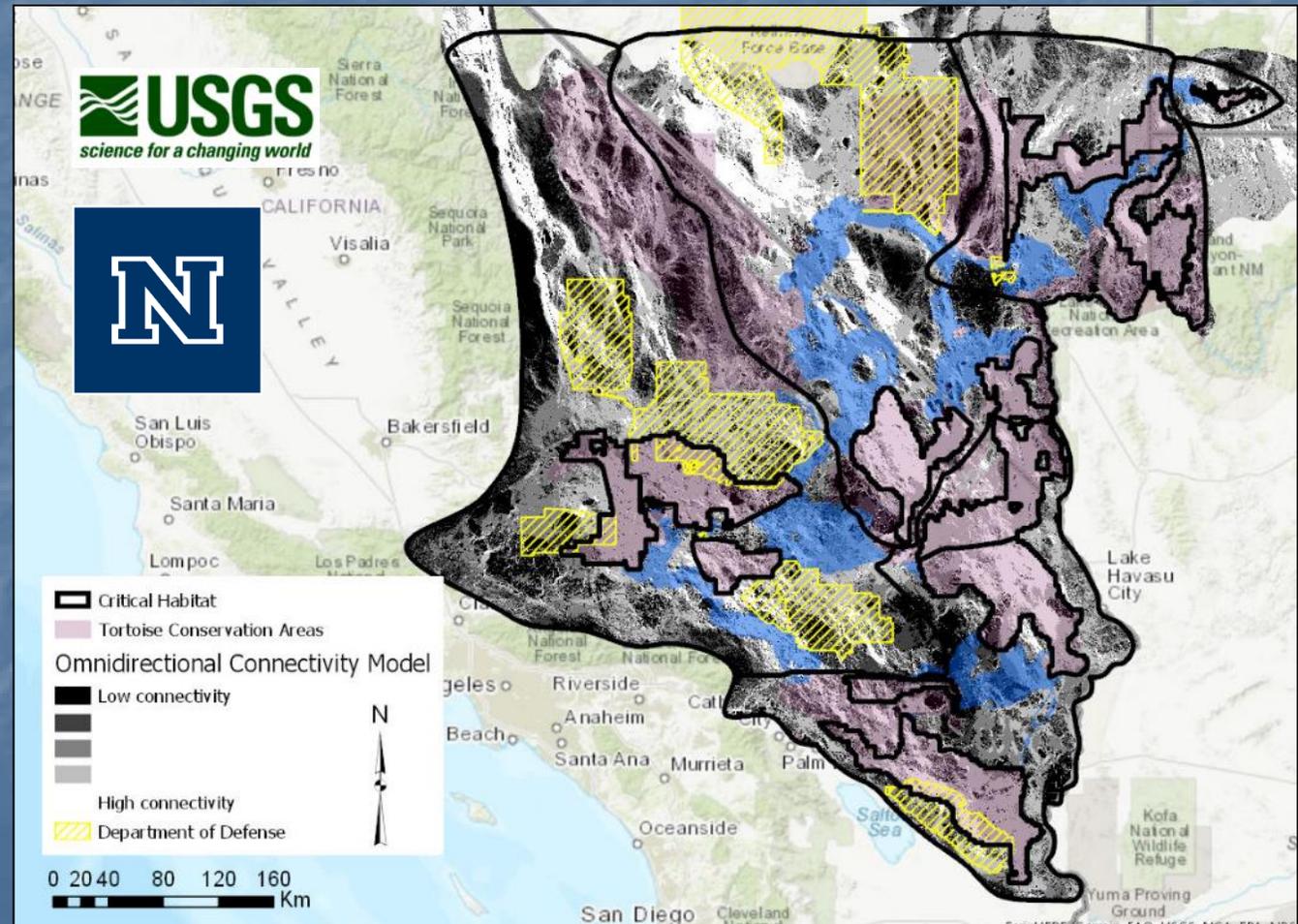


- Reinitiation of consultation for heavy maneuver installation BOs (Fort Irwin and MCAGCC)
- Recovery commitment
- 5-year plans (NFWF)

Connectivity White Paper



- Framework for MDT recovery
 - Historic connectivity & challenges
 - Structure and dynamics of tortoise populations
- Recent research
- Management implications
 - Managing entire matrix
 - Limit surface disturbance
 - Road mortality & passage
 - Adaptive management



Strategic population augmentation can build a bridge between mitigation translocations and species recovery



Guidelines for Reintroductions and
Other Conservation Translocations

Version 1.0



REINTRODUCTION AND RESCUE SPECIES SPECIALIST GROUPS' TASK FORCE ON MOVING PLANTS AND ANIMALS FOR CONSERVATION PURPOSES



Population Augmentation Strategy for the Mojave Desert Tortoise Recovery Program

U.S. FISH AND WILDLIFE SERVICE



SEPTEMBER 2020 DRAFT



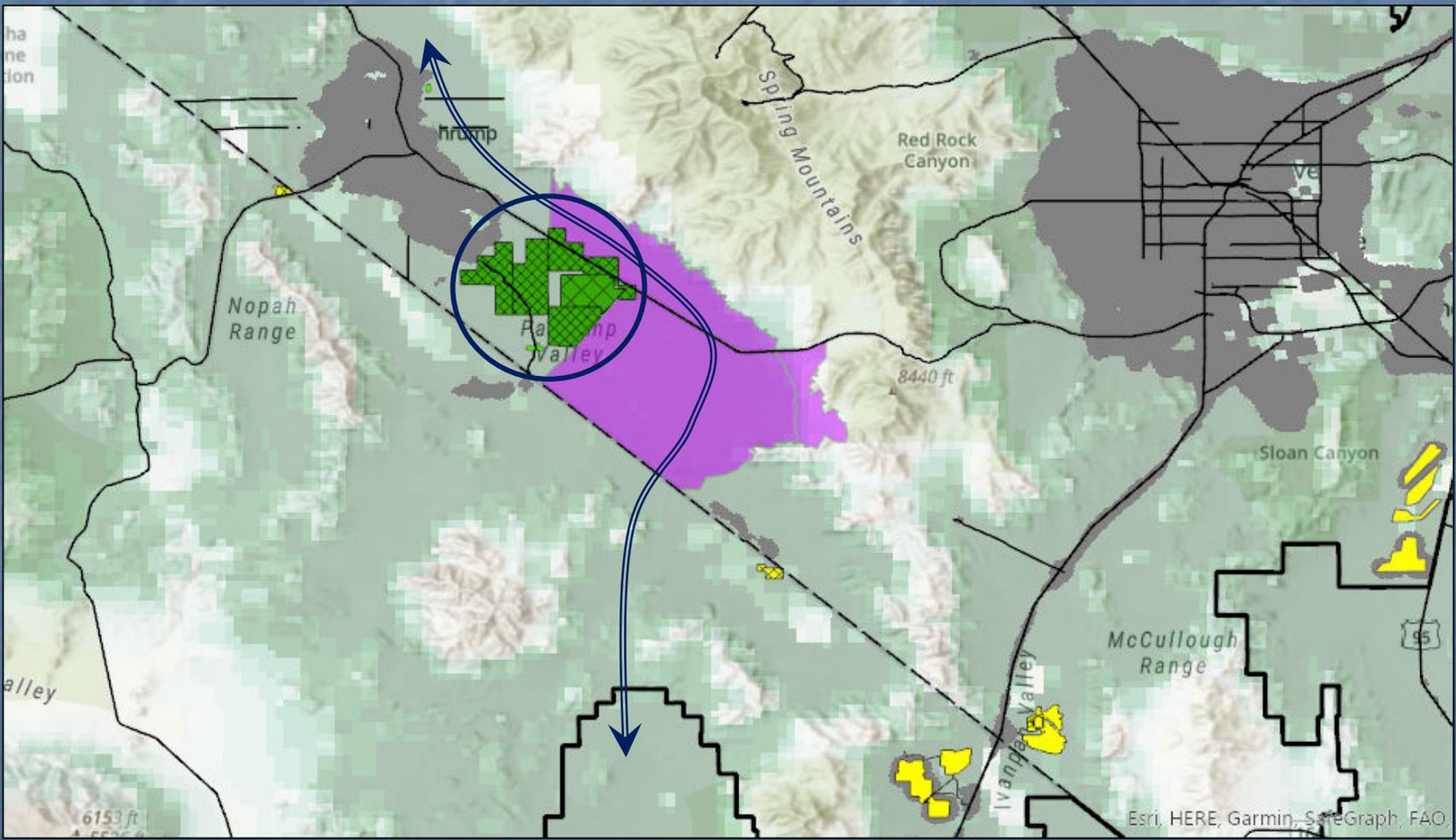
Translocation of Mojave Desert Tortoises from Project Sites: Plan Development Guidance

U.S. FISH AND WILDLIFE SERVICE



JUNE 2020

Strategic population augmentation can build a bridge between mitigation translocations and species recovery





DISCUSSION OF OBSTACLES



Habitat Restoration

- Native seed sources
 - Funding
- Durability of restoration sites
 - OHV enforcement
 - Applicability of restoration as mitigation
 - Long-term funding for follow-up treatments
 - Long-term protection from future land-use authorizations



Predator Control

- Reducing raven subsidies
 - Federal, state, local rules and regulations
 - Lack of cohesive, desert-wide outreach program
 - Need to evaluate effectiveness of subsidy control



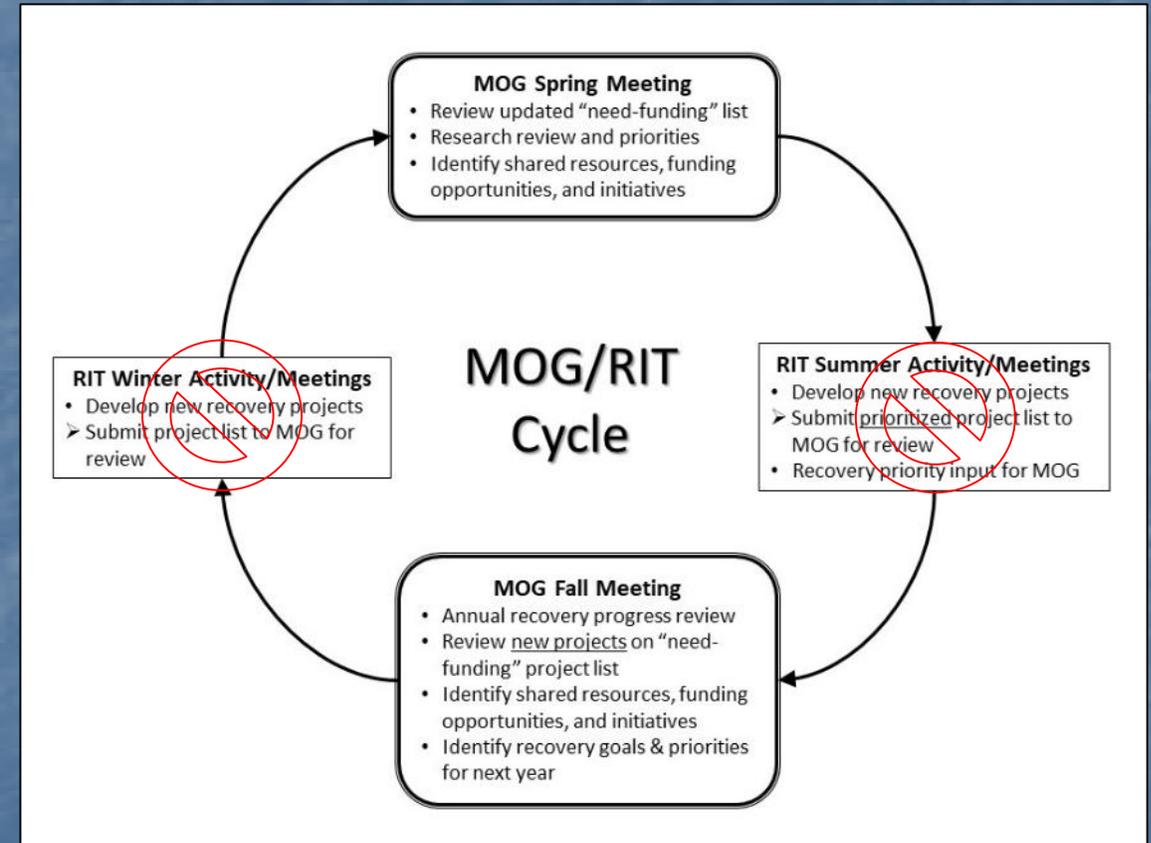
Highway Fencing

- NEPA, NHPA compliance for "proactive" fencing
- Ability to use mitigation funds to install
 - Reclaimed habitat value
 - Durability of reclaimed habitat
 - Long-term management
 - Mitigation for loss of "sink habitat" in shoulder/median
- DOT ROW authorization vs maintenance responsibility
 - Funding for maintenance
 - Encroachment permitting

How can the MOG and RITs be more effective?



- Disparate funding sources
 - REAT/DMG raven accounts with NFWF
 - NV BLM remuneration fees
 - NV USFWS mitigation fees
 - Clark County MSHCP/SNPLMA
 - Washington County HCP
- No dedicated funding pool, regulatory hurdles





A potential approach

- Adapt Recovery and Sustainment Partnership strategy in the West Mojave as a model for the MOG to step down recovery implementation range-wide
 - Focus on MOG priorities and other recovery unit-specific needs
 - How to overcome obstacles
- Agencies contribute to funding pool for RFPs under regional implementation plans (e.g., 5-yr plans with RITs)
 - Measure progress by monitoring specified metrics
 - E.g., California raven management