New Projects 2011

Habitat Suitability Modeling

Camera Surveys

Ridgecrest Solar Power Plant

Habitat Suitability Modeling

- USGS Las Vegas is the lead, with Univ. Nevada Reno also involved
- Building on and adapting the desert tortoise model
- Predicting habitat suitability throughout the range (plus a buffer) is the goal
- Connectivity and landscape genetics will be featured also
- Funding from CEC through the PIER Program

Camera Surveys

- MGS surveys on BLM and State lands using camera sampling
- Goal is to demonstrate large-scale sampling with randomized site selection
- Parameters to be estimated are occupancy and detection probability
- Environmental data will be collected at study sites and modeled as covariates
- Funding from BLM and US Army

Develop Sampling Frame

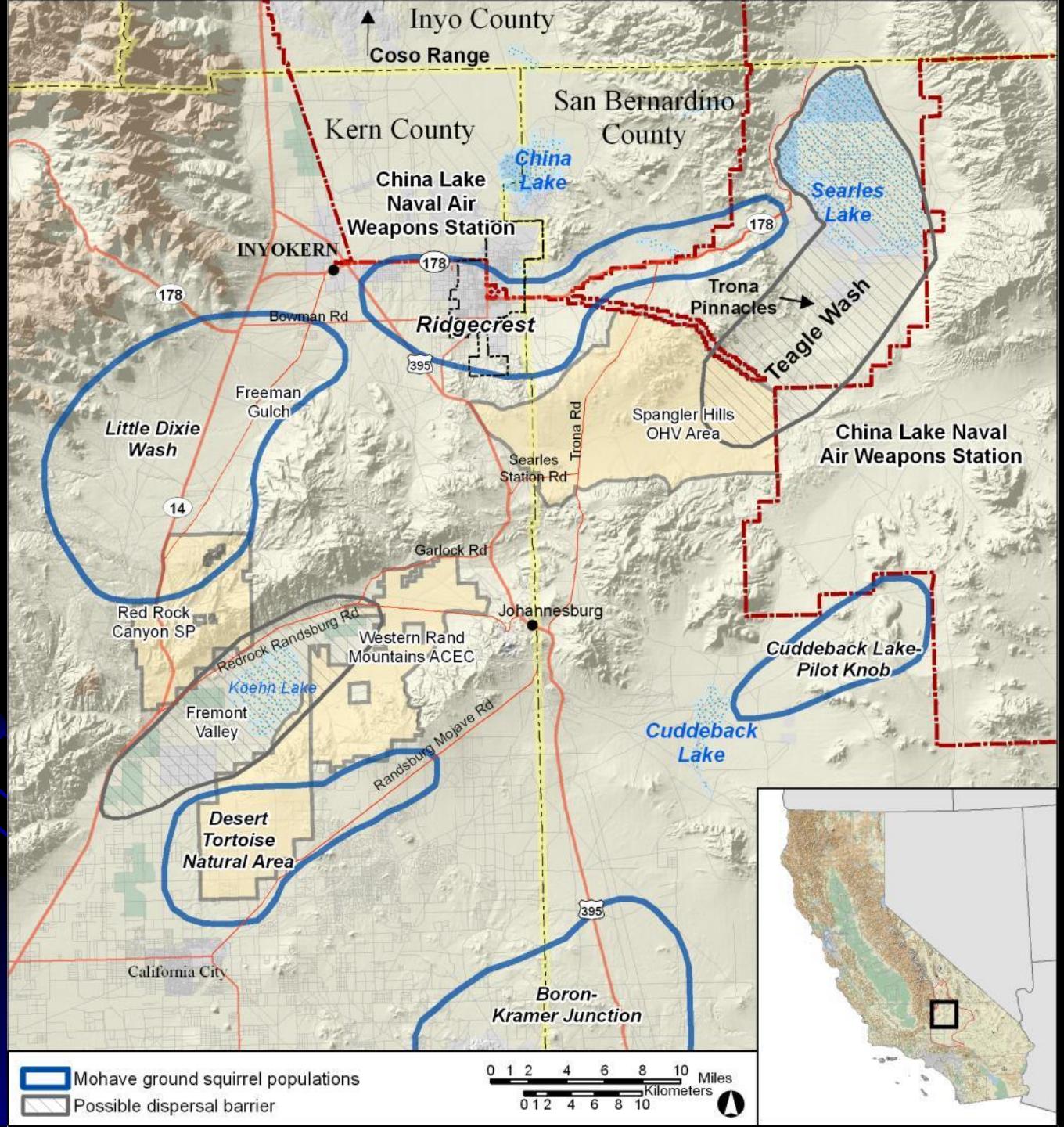
- Uniform system for locating and selecting study sites in a randomized manner
- Basic framework would be 10x10 km grid, roughly same dimensions as 6x6 mi township – ca. 200 of these units cover MGS range
- Within each grid unit, divide into 1x1 km sub-units
- Highest resolution or smallest sampling unit would be 500x500 m block

Site Selection for Camera Studies

- Agree on priority region to survey, then use GIS layer showing BLM and state ownerships
- Place 10 km, then 1 km, then 0.5 km subdivisions on the map
- Within each randomly-chosen 500x500 study site, 9 cameras at 150 m centers
- 90 cameras available, so sample 10 sites simultaneously

Ridgecrest Solar Power Plant

- Project has been going through CEC permitting process
- Impacts to MGS connectivity are considered to be impossible to fully mitigate
- Applicant has asked for 2-yr suspension of CEC process to conduct study of MGS connectivity values and functions in the region of the project


Inyo County
Coso Range
Kern County
San Bernardino County
China Lake
China Lake Naval Air Weapons Station
INYOKERN
178
Searles Lake
Trona Pinnacles
Teagle Wash
Bowman Rd
Ridgecrest
395
Freeman Gulch
Little Dixie Wash
Spangler Hills OHV Area
Trona Rd
China Lake Naval Air Weapons Station
Searles Station Rd
14
Garlock Rd
Johannesburg
Red Rock Canyon SP
Redrock Randsburg Rd
Western Rand Mountains ACEC
Cuddeback Lake-Pilot Knob
Koehn Lake
Fremont Valley
Randsburg Mojave Rd
Cuddeback Lake
Desert Tortoise Natural Area
California City
Boron-Kramer Junction
Mohave ground squirrel populations
Possible dispersal barrier
0 1 2 4 6 8 10 Miles
0 1 2 4 6 8 10 Kilometers

Research Planning Process

- This fall will see development of a comprehensive study plan and preparation for spring field season
- Planning with be open, with agencies and intervenors participating
- Research components include live-trap sampling, radio-telemetry, habitat analysis, landscape connectivity modeling, and genetic connectivity study