February 18, 2025

DESERT CONSERVATION PROGRAM PROJECT COMPLETION SUMMARY
Drone Survey Analysis
2023-RESI-2390A

The work for the above referenced project has been completed. Below is a summary of project related information.

The purpose of the above referenced project was:

The Desert Conservation Program (DCP) conducts occupancy surveys to detect change in Desert Tortoise populations on the reserve system. This collection of data enables DCP to take actions to help increase the population when needed. Due to rising costs of conducting surveys, the use of new technology has become more imperative of an option when available to acquire similar data at lower costs. Through machine learning technology, drones will be able to identify tortoises and burrows faster than traditional field sampling. The project will analyze data collected with drones and paired with on the ground occupancy surveys to allow a comparison between the survey types.

The major accomplishments or findings of this project include:

Drone flights were paired with pedestrian surveys so that they could be evaluated together. The drone/AI survey method was successful in detecting tortoise and burrows in the BCCE. The estimated population density of 3.2 tortoises/km^2 is somewhat higher than reported densities for this portion of the Mojave. Most tortoises appear to be concentrated within the southern and northeastern portions of the easement. It was recommended that future applications of the drone/AI survey method be conducted over large sample areas.

For more information about this project and/or for other Project Reports or Symposium Reports, please visit our website.

If you have any questions about this project, please contact Scott Cambrin, at (702) 455-3859.