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desert conservation
PROGRAM

Date: March 15, 2018

TO: DISTRIBUTION

RE: DESERT CONSERVATION PROGRAM PROJECT COMPLETION NOTIFICATION:
**EVALUATION OF DRONE-BASED, AUTOMATIC
DESERT TORTOISE DETECTABILITY
2017-BRAINLIKE-1785A**

The work for the above referenced project has been completed. Please see the attached for all project related information.

The purpose of the above referenced project was:

To use drones along with automatic image detection software that will offer more coverage, better precision and/or more coverage at a lower cost to detect desert tortoise on the Boulder City Conservation Easement.

The major accomplishment or findings of this project include:

The project area was flown with drones and photographed to create a 1cm resolution orthomosaic grid on back to back days. Change detection was used to look for differences between the two days. The process was able to detect the two known tortoises to be above ground in the area at the time of the flight showing that the method would be useful for detecting tortoises above ground; however, further tests showed that, at that resolution, tortoises would be indistinguishable from vegetation. More work is needed to show that tortoises under vegetation can be located with higher resolution cameras. Currently, this method would be able to detect all tortoises above ground and not obstructed by vegetation over a larger area and cheaper than current methods but with lower detection overall due to the limitations.

For more information about this project and/or for other Project Reports or Symposium Reports, please visit our website at: <http://www.clarkcountynv.gov/airquality/dcp/Pages/default.aspx>

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

Sincerely,



Marci D. Henson
Director, Air Quality
Administrator, MSHCP

cc:

US Fish and Wildlife Service
Board of County Commissioners (7)
Permittees' Executive Committee
Permittees' Process Management Group
Thomas Boldt, Purchasing
Catherine Jorgenson, District Attorney – Civil Division
Desert Conservation Program Community Advisory Committee
Desert Conservation Program Interested Parties List
Multiple Species Habitat Conservation Plan Implementing Agencies
Science Advisor
SNPLMA Office (for SNPLMA projects)
Congressional Office
DCP Staff