

**Agency/Organization:** Bio Logical LLC

**Project Name:** Desert Tortoise Occupancy on the Boulder City Conservation Easement

**Project Number:** 2020-BIO-2021D

**Reporting Period:** April 1, 2024 – June 30, 2024

**Project Contact Name and Information:**

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**QUESTION 1: What did you accomplish during this reporting period?  
How did these accomplishments help you reach the goal of your project?  
If relevant, what indicators or benchmarks were used to determine your progress?**

During this quarter, Bio Logical began and completed project field work, successfully completing all plots deliverables for the second quarter. All data was collected and organized by date and plot into deliverables for Scott Cambrin. Each deliverable received feedback, and any necessary changes to meet field and technical aspects of project goals were implemented.

Completed items for this quarter were; M20 Start Field Work, D30 Quarterly Report Q1, D31 Data Deliverable for 30 Plots, D32 Data Deliverable for 90 Plots, D33 Deliverable for 150 Plots, M21 End Field Work, D34 Deliverable for 210 Plots, and D42 through D47 Drone Data Deliverables from the deliverable fee schedule. Drone Data for deliverable D47 was delayed a couple of days to include the final three days of drone data, as that was the final drone data deliverable.

**QUESTION 2: What, if any, problems were encountered? Briefly describe those problems and the manner in which they were dealt.**

During execution of this quarter's milestones, we experienced minor and common data collection and reporting issues. The Wildnote software works well for expeditious, low error data collection, but having biologists make sure that all items sync with the servers is important. One team member had issues with photo sync, but we discovered earlier on during real time QA/QC in the field and were able to collect backup photos when sync issues were occurring. Each team member was instructed to collect a track. This makes the loss of a single team member's data on a given day a non-issue.

Staffing and scheduling issues this year were basically resolved, with only a couple of minor challenges arising from temperature issues late in the season. Scott Cambrin did conduct one additional training for us, primarily due to not all our staff being able to attend the initial training due to being in the field on different projects at that time.

**QUESTION 3: What, if any, proposed activities were not completed? Briefly describe those activities, the reasons they were not completed and your plans for carrying them out.**

All proposed activities for this quarter were completed successfully and delivered on time, with the exception of D47 Drone Data Deliverable, which was pushed back upon approval from Scott Cambrin to include the remaining days of drone photographs rather than creating a new deliverable to capture the last 3 days.

**QUESTION 4: What is the calculated percent of work completed?**

An unweighted 'line item' only calculation of project completed currently sits at 100% (24 of 24 task items) for year four, 2023. For year five in 2024, 12 out of 23 (52.2%) are now complete upon this submittal. All tasks are on schedule as described in deliverable schedule.

**QUESTION 5: Do you foresee any upcoming problems with future project activities? If so, how do you propose to overcome those problems?**

Bio Logical is constantly fine tuning both our office processes and our field processes to create work flows and processes that are streamlined. After five years of this project, we still have a few things that we can see some additional improvements on to head off future problems.

The biggest problems to conduct this same work again next year are factors outside of our control. For instance, drone operations are somewhat impacted by critical infrastructure, Temporary Flight Restrictions, and weather. While most of these factors are beyond our ability to control, we can mitigate them in various ways. For the weather, we are exploring options to source a drone with greater capabilities for wind handling than the drone used for 2024. Increasing the operating envelope of our equipment would make all but the most extreme weather events a non-issue for photo data collection.

**QUESTION 6: Is there anything else you want to tell the DCP about this project?**

Bio Logical appreciates the cooperation and understanding of extraneous circumstances during this unprecedented time and all the extra work required to move forward with this project. Scott Cambrin is very easy to reach, easy to work with, and provides feedback on deliverables rapidly.

**QUESTION 7: What was produced during the reporting period?**

Bio Logical completed all field work and produced all deliverables related to that fieldwork for the 2024 field season. Uncompiled data sets have been turned in and the annual project data is being processed for delivery in Q3 2024.