

Quarterly Report

Agency/Organization: The Great Basin Institute

Project Name: Rangewide Monitoring

Project Number: 2023-GBI-2325A

Reporting Period: April 1-June 30, 2025

Project Contact Name and Information: Terry Christopher
7250 S Durango Drive Suite 130
PMB #263
Las Vegas, NV 89113
702-433-2600

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?

This quarterly report documents the status of the Desert Tortoise Range-Wide Monitoring Project conducted by the Great Basin Institute (GBI) for the third quarter of project number 2023-GBI-2025A; April 1-June 30, 2025. GBI was contracted by the Clark County Desert Conservation Program (DCP) to conduct line-distance sampling (LDS) surveys and telemetry surveys to estimate the population of the Mojave desert tortoise (*Gopherus agassizii*) in pre-determined strata in Clark County, Nevada.

Project Goals and Objectives:

- Train monitors on project protocols, handling, and desert safety.
- Complete assigned transect surveys and submit data as assigned in the deliverable schedule.
- Complete telemetry surveys to correspond with transect surveys.
- Collect monthly locations on telemetered tortoises in Gold Butte and Halfway Wash.
- Write reports as assigned in the deliverable schedule.

Objectives Completed this Quarter:

- Finalized training of monitors on project protocols, handling, and desert safety.
- Completed 243 transects in three strata.
- Submitted regular data uploads to Clark County.
- Completed telemetry surveys that corresponded with transect surveys.
- Collected monthly locations on telemetered tortoises in Gold Butte and Halfway Wash.
- Submitted reports as assigned in the deliverable schedule.

Surveys began on 31 March and were conducted through 15 May 2025. Surveys were completed in Eldorado Valley, Gold Butte, and Mormon Mesa strata. Eleven teams of two each walked a single 12-kilometer transect per day, four days a week, following LDS protocol. Transect monitors completed 243 transects and observed 34 live tortoises and 99 carcasses on transects, plus 5 live tortoises and 12 carcasses opportunistically within the monitoring strata.

Telemetry surveys corresponded with transect surveys in both location and time. Two telemetry monitors recorded multiple observations per day for a set of tortoises equipped with radio antennae in Piute-Mid (corresponding with Eldorado Valley strata), Gold Butte, and Halfway Wash (corresponding with Mormon Mesa strata). Telemetry surveys (G_0) began each day roughly 30 minutes before transect start times, and continued until transects were concluded or at 4:00 PM, whichever came first. Telemetry monitors recorded 813 G_0 observations of tortoises plus 25 non- G_0 observations (including 1 transmitter replacements, 1 new transmitter attachments, and 1 mortality). All required deliverables were submitted.

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

No issues were encountered.

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.

Project activities are on track at this time.

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

Project activities for this quarter began on 1 April 2025. It is estimated that 75% of the project has been completed for Year 2 at this time. More progress is expected in the next quarter, as GBI will submit an annual report and give a presentation of the project, in addition to continuing monthly observations at established telemetry sites.

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

No future problems are foreseen for upcoming project activities at this time.

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

LDS surveys for this project consisted of two-person teams walking 12-kilometer transects single file, separated by 25 meters between the two team members. All transects were square (3 kilometers on each side) and walked in cardinal directions, unless reflection was required due to human-made obstacles (private property, major highways, etc.) or stratum boundaries. In some cases rugged terrain required transect interruptions for team safety. To assure that transects were walked on the assigned bearings, waypoints were taken every 500 meters. When either a live or deceased tortoise was sighted, the team made a series of measurements from the transect line to the tortoise. These measurements will be used in data analysis. Size, sex, and a simple body condition assessment were recorded for each tortoise when possible. Tortoises were handled with minimal contact by one individual in the team wearing single-use gloves. When possible, all live tortoises were marked using a paper tag with a unique number provided by the US Fish and Wildlife Service (USFWS).

Telemetered tortoises were monitored using a VHF receiver and directional antenna. Information on location and behavior was collected for each individual multiple times per day, every day that transect surveys took place. Telemetry technicians changed sites as transect survey locations changed.

All data were recorded in the field on paper datasheets and electronically using iPads with ESRI Survey123 data forms. Data were downloaded into a master database each week and assessed for consistency and errors following procedures established by the USFWS.

QUESTION 7: What was produced during the reporting period?

In the first quarter, GBI successfully completed the training of 22 transect monitors and two telemetry monitors for the Desert Tortoise Range-Wide Monitoring Project.

In the second quarter, Transect monitors completed 243 transects and observed 34 live tortoises and 99 carcasses on transects, plus 5 live tortoises and 12 carcasses opportunistically within the monitored strata. Telemetry monitors recorded 813 G0 observations of tortoises plus 25 non-G0 observations (including 1 transmitter replacements, 1 new transmitter attachments, and 1 mortality). All required deliverables were submitted.

Please report on the status of each Milestone and Deliverable, indicate whether they are not started, in progress, or completed and provide comments on the status as necessary

Appendix 1
Milestone/Deliverable/Invoicing Schedule Table
Project Name: Range Wide Monitoring - Year 2
Project Number: 2023-GBI-2325A

Date Due	Deliverable / Milestone #	Deliverable / Milestone Title	Status
1.1.2025	M08	Contract Award and Mobilization	Complete
1.5.2025	D13	Quarterly Progress Report (Oct-Dec)	Complete
1.13.2025	M09	Project Kick-off Meeting	Complete
3.25.2025	M10	Training	Complete
4.5.2025	D14	Quarterly Progress Report (Jan-Mar)	Complete
4.13.2025	D15	Permits	Complete
4.13.2025	M11	Begin Field Work	Complete
4.15.2025	D16	Training Data Upload	Complete
4.25.2025	D17	Digital Data Upload	Complete
5.2.2025	D18	Digital Data Upload	Complete
5.9.2025	D19	Digital Data Upload	Complete
5.16.2025	D20	Digital Data Upload	Complete
5.23.2025	D21	Digital Data Upload (If Necessary)	Complete
5.30.2025	D22	Digital Data Upload (If Necessary)	Complete
5.31.2025	M12	Completion of Field Work	Complete

6.5.2025	D23	Annual Project Data	Complete
7.1.2025	D24	Biennium Progress Summary Report	Complete
7.5.2025	D25	Quarterly Progress Report (Apr-June)	Complete
7.30.2025	D26	Annual Project Report	
8.10.2025	M13	End of Season Debriefing Meeting	
TBD	M14	2025 Annual Project Review Presentation	
10.5.2025	D27	Quarterly Progress Report (July-Sept)	
12.1.2025	D28	Project Summary Form and Claim Release	
12.31.2025		Year 2 Closeout	