



## **Quarterly Report**

**Agency/Organization:** OrniLogic, LLC

**Project Name:** Subsidized Raven Management at the BCCE

**Project Number:** 2023-ORNILOGIC-2362B

**Reporting Period:** April 1, 2025 – June 30th, 2025

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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?**

This quarterly report documents the status of the Subsidized Raven Management at the BCCE conducted by the OrniLogic, LLC for project number 2023-ORNILOGIC-2362B; April 1, 2025 to June 30th, 2025. OrniLogic, LLC has taken over the contract formerly held by Hardshell Labs, Inc. While the first quarter of the year was exclusively devoted to the process of reformatting the contractual agreement and resetting the study plans, the second quarter has been characterized by action. These actions have included:

1. Selecting locations and collecting data on raven presence at subsidy sites, within the city of Boulder City, and within the northeast portion of the BCCE.
2. Building, testing, and deploying at the landfill and sewage treatment facility two state-of-the-art laser systems for keeping ravens away from those sites.
3. Deploying nine custom built electronic systems for sensing raven predation activity and spraying a noxious, non-toxic chemical at potential predators to teach them not to attack juvenile tortoises.
4. Oiling one raven nest in a cliff near the BCCE in addition to locating 26 active raven nests for future oiling. OrniLogic also assessed distribution of potential nesting substrate to better manage survey effort for 2026 and identified roadblocks to access raven nests located on utility towers.

Project Goals and Objectives:

- Implementing a comprehensive, multi-pronged approach to address challenges posed by predator subsidies encompassing a complex interplay of factors, including human behavior, choices, and desires, compounded by the resourcefulness of ravens.
- Reduce raven access to demonstrated subsidies to reduce their overall numbers and the spillage of the problems they cause from Boulder City facilities into adjacent

- Mojave desert tortoise habitat.
- Refine methods of raven management in an urban area, surrounding support facilities, and adjacent desert tortoise habitat.
- Use acquired data and techniques to build upon and refine the recommendations for reduction of desert tortoise predation by ravens in the BCCE Predator Management Plan.
- Apply these lessons and techniques to the large-scale subsidy site of Apex Landfill.

Objectives Completed this Quarter:

- OrniLogic has begun implementing a comprehensive, multi-pronged approach to address challenges posed by predator subsidies surrounding BCCE. This approach included the installation of two remotely controlled laser systems at both the landfill and wastewater treatment facility, the deployment of 9 PATS units, raven egg oiling, and extensive raven nest mapping.

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

OrniLogic was denied access to the majority of transmission lines where raven nests occurred in Spring of 2025. This unfortunate circumstance arose due to various policy changes within the utilities and had little to do with OrniLogic. However, this highlighted the need for cultivating strong relationships with each electrical utility traversing BCCE including LADWP, NVE, WAPA, and MWD.

The lack of success on transmission lines also forced OrniLogic to look beyond the most likely nest locations and expand their search efforts out into natural substrate locations where additional nests were indeed found. The outcome is that OrniLogic has successfully identified 26 nest locations on both natural substrate and transmission towers as likely viable targets for spring of 2026.

**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.**

The remote egg oiling operations were not carried out to the fullest extent of OrniLogic's capabilities but the circumstances surrounding this challenge were beyond the company's control. A concerted effort has been launched by OrniLogic to begin forming relationships with the various utility companies operating within BCCE. The end goal is to earn the trust and approval for broad and independent remote egg oiling across the entire BCCE footprint wherever transmission line right-of-ways exist.

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

Approximately 46% of the project milestones have been met at this point in the project's new timeline.

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

OrniLogic continues to push the envelope of what our technology can do and the conditions which it can withstand. As our new laser systems experience the extremes of summer in the Mojave Desert, it is possible there will be temporary failures of electronic components or lapses in connectivity. However, we have developed systems for quickly identifying and remedying problems as they arise and the specialized products and services we provide will only be better because of it.

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

We would like to discuss in more detail the proposed large-scale project in Apex Landfill and begin the planning for a rollout of this work.

It also would be appropriate to explore what an expanded egg oiling effort could look like and how to fund such additional work. The current BCCE budget does not support the scale that would likely be necessary to expand nest searching and egg oiling drone flights outside of the currently prioritized transmission line right-of-ways. Expanding this effort would be the logical next step in reducing the presence of raven nesting across the entire BCCE and protecting the tortoises who call it home.

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

Two state of the art, remotely fired laser systems received new user interfaces, making them more operationally ready. Twenty-six additional raven nesting locations were documented and mapped as well as the successful oiling of one natural substrate nest. 8 passive Techno-torts and 9 PATS units were deployed, generating 9,320 field camera images captured for analysis. Over 975 miles of raven surveys were conducted as well as 195 point counts. Counts of ravens were highest at the landfill (points LFN, LFS, LFSE, and LFW) and sewage ponds (point SP) and relatively low at all other sites surveyed (Figure 1).

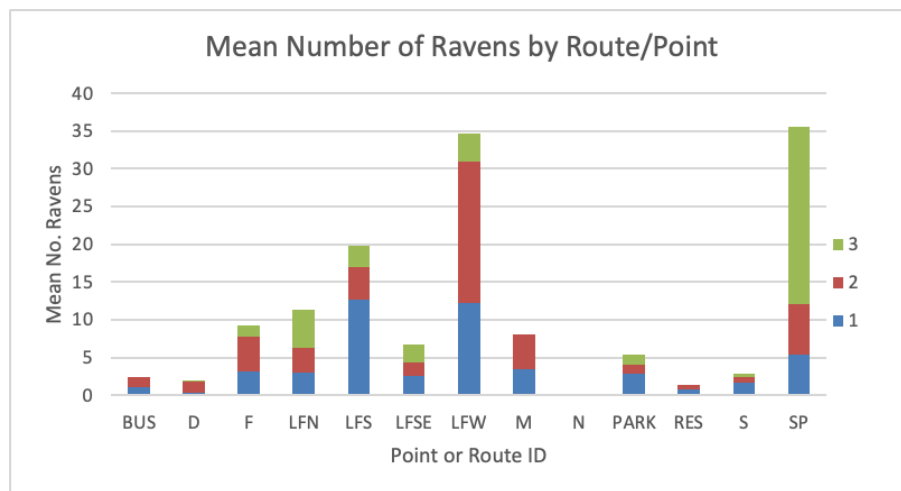


Figure 1. Mean number of ravens at each site and road survey location in 2025. Blue indicates April, red indicates May, and Green indicates June.

**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 – BASIC SERVICES**

**Milestone/Deliverable/Invoicing Schedule Table**  
Subsidized Raven Management at the BCCE  
2023-ORNILOGIC-2362B

<b>Date Due</b>	<b>Deliverable / Milestone #</b>	<b>Deliverable / Milestone Title</b>	<b>Status</b>
PO issue date (March 19, 2025)	M01	Contract Award and Mobilization	Complete
April 3, 2025	M02	Project Kick-off Meeting	Complete
30 days after PO issue date (April 18, 2025)	D01	Permits	Complete
30 days after PO issue date (April 18, 2025)	D02	Work Plan	Complete
30 days after PO issue date (April 18, 2025)	D03	Data Management Plan	Complete
May 1, 2025	M03	Fixed lasers installed and functioning	Complete
May 1, 2025	D04	First Quarterly Data Deliverable	Complete
April 5, 2025	D05	Quarterly Progress Report (January 1, 2025 – March 31, 2025)	Complete
May 15, 2025	M04	First Quarterly Project Status Meeting	Complete
May 30, 2025	D06	Egg oiling operations complete - 2025	Complete
June 30, 2025	D07	Biennium Progress Summary Report	Complete
July 1, 2025	D08	Second Quarterly Data Deliverable	Complete
July 5, 2025	D09	Quarterly Progress Report (April 1, 2025 – June 30, 2025)	Complete
July 15, 2025	M05	Second Quarterly Project Status Meeting	Not Started
TBD, August 2025	M06	2025 Annual Project Review Presentation (If requested)	Canceled

October 1, 2025	D10	Third Quarterly Data Deliverable	Not Started
October 5, 2025	D11	Quarterly Progress Report (July 1, 2025 – September 30, 2025)	Not Started
October 15, 2025	M07	Third Quarterly Project Status Meeting	Not Started
January 5, 2026	D12	Quarterly Progress Report (October 1, 2025 – December 31, 2025)	Not Started

April 5, 2026	D13	Quarterly Progress Report (January 1, 2026 – March 31, 2026)	Not Started
May 31, 2026	D14	Egg oiling operations complete - 2026	Not Started
June 15, 2026	D15	Final Project Data	Not Started
June 15, 2026	D16	Final Project Report	Not Started
June 20, 2026	M08	Debrief Meeting	Not Started
July 15, 2026	D17	Final Biennium Progress Summary Report	Not Started
20 Days Prior to End Date	M09	Receipt Submittal (As necessary)	Not Started
August 15, 2026	D18	Final Project Review Summary Form and Project Claim Release	Not Started
September 15, 2026		Project Closeout	Not Started