Monterey Coast-Sierra de Salinas Linkage Study

Conducted by The Big Sur Land Trust & Pathways for Wildlife

Objectives & Goals

1) To ***increase our understanding of wildlife movement*** throughout the Central Coast region as there are several mountain ranges, coastal areas, valley floors, and uplands habitats that need to be connected to allow for wildlife movement to ensure healthy populations of wildlife and gene flow (Thorne et al 2002, Critical Linkages: Bay Area & Beyond 2013). Critical areas that need to be connected to maintain healthy wildlife populations and ensure the ability for genetic flow between them include; the Coastal Dunes of Monterey to the Sierra de Salinas and from the Gabilan Range to Santa Cruz Mountains (CA Essential Habitat Connectivity Project 2010).

2) To ***ground truth the Bay Area Critical Linkage Designs*** by documenting focal species movement through the Santa Cruz Mountains-Gabilan Range linkage design and habitat suitability maps from the Monterey Coast to the Sierra de Salinas.

3) To make ***recommendations for enhancing connectivity*** for wildlife movement across the landscape in areas identified with high degrees of wildlife movement.

Results

Maps for each focal species were made by overlaying the results from the camera data with the species habitat suitability map that was produced by the Bay Area Critical Linkages, along with including directions of high degrees of movement at camera stations.

For *North American badger*, *bobcat*, *mountain lion*, and *Black tailed deer*, the highly suitable habitat is very similar and overlaps running from the Monterey Coast down to the Sierra de Salinas. **All the camera stations in which the focal species were detected at, fell within highly suitable habitat designated for them, which is connected and spans down from the Monterey Coast to the Sierra de Salinas, as a habitat linkage for these focal species.**

i. Pathways Animals are Using within the Linkage

Animals are consistently moving from **Martin Dunes** across the **USFW National Wildlife Refuge to** the **Salinas River** and then crossing underneath the **Highway 1 Bridge** on either side. From this point they are traveling along the *Salinas River as there is ample habitat to travel along on either side of the banks*. Multiple species were recorded traveling along the **Salinas River at the Highway 68 Bridge**. The Salinas River has wildlife exclusionary fencing at many points along the river, in which creates a funnel effect. However, there is a confluence with **El**

Toro Creek and the Salinas River just north of **Reservation Road**. Animals then travel **from the Salinas River south along El Toro Creek** to access **Fort Ord National Monument**. From Fort Ord animals, then travel under the **Hwy 68 Bridge at El Toro Creek and San Benancio Road** along a **cattle trail adjacent to Highway 68** to access **El Toro Park and Marks Ranch**, which are **gateways to the rest of the Sierra de Salinas**. These pathways are reflected in the total number of detections at each camera station and the high degrees of recorded multiple species movement throughout the linkage area (Figure 1 & 2).

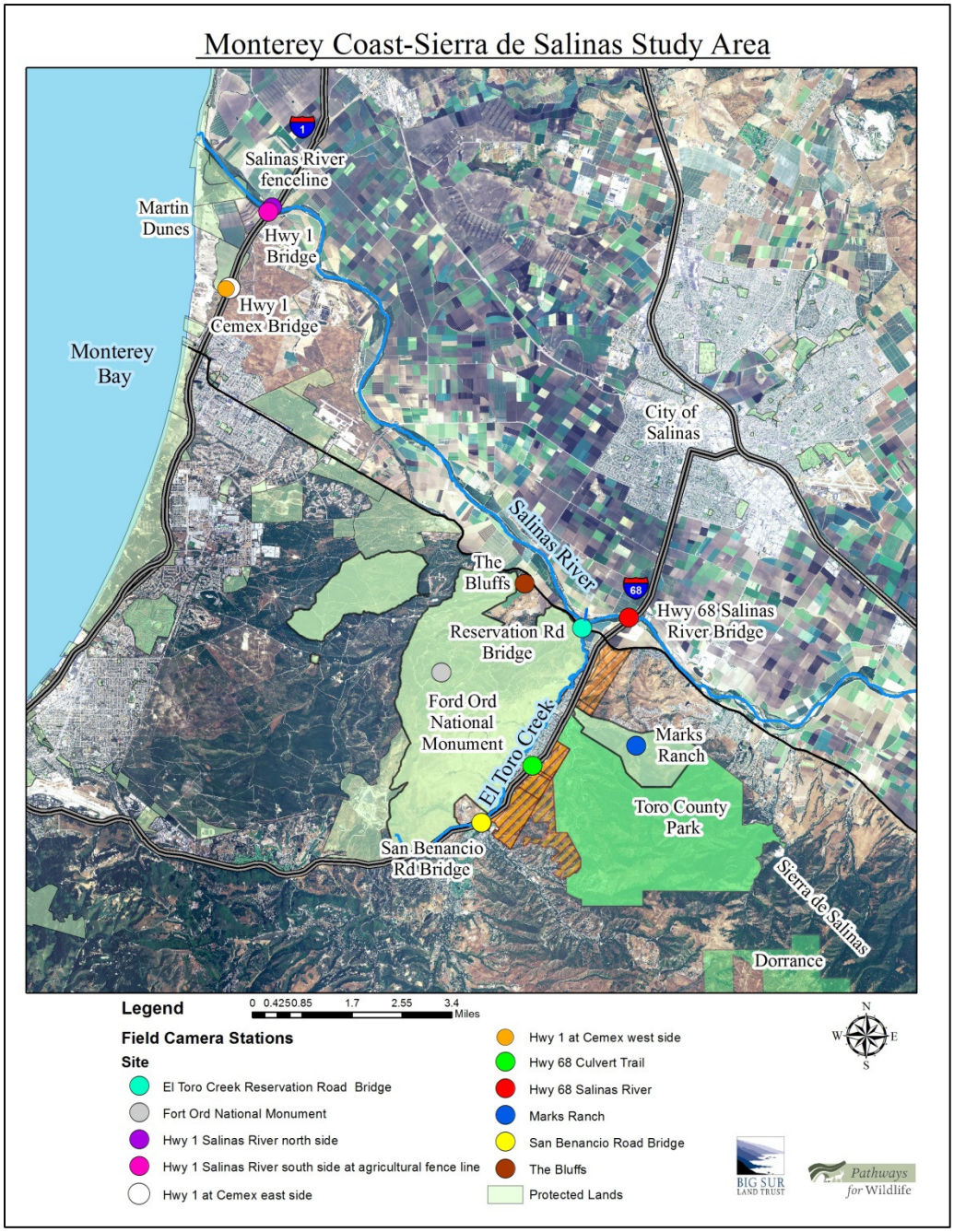

Figure 1: Monterey Coast-Sierra de Salinas Study Area & Camera Sites.

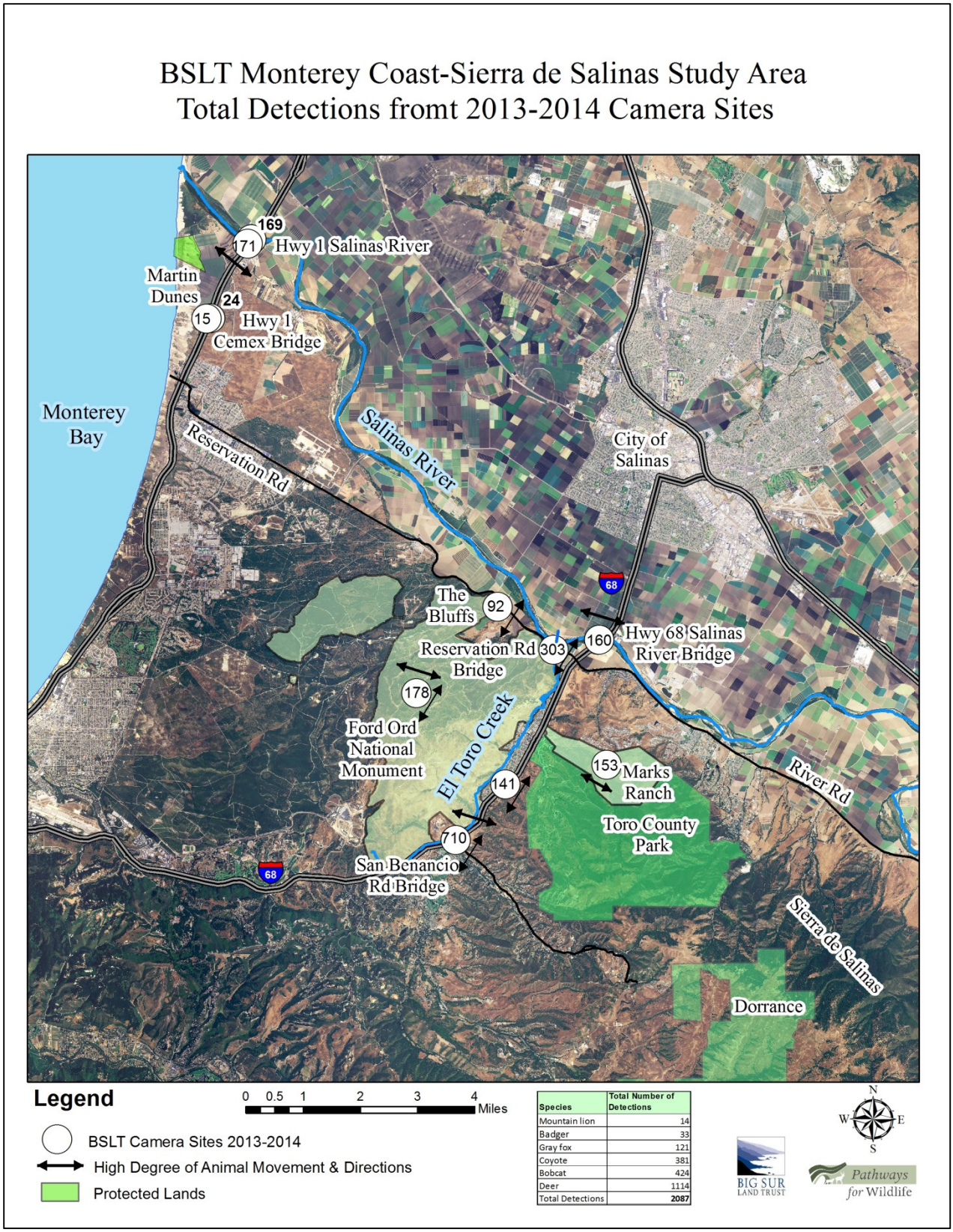

Figure 2: Total Detections of Focal Species in the Monterey Coast-Sierra de Salinas Study Area.

ii. BACL Overlay Analysis for the Monterey Coast to the Sierra de Salinas for Bobcats.

Very similar to the other focal species suitability maps and locations, the highly suitable bobcat habitat runs from the Monterey Coast at Martin Dunes, to the Salinas River, and habitat on the south side of the Salinas River, down to the Fort Ord National Monument, across Highway 68 to Marks Ranch, El Toro County Park and then down throughout the Sierra de Salinas (Figure 3).

These bobcat locations confirm use of the highly suitable bobcat habitat which strongly indicates this is an important linkage for bobcats.

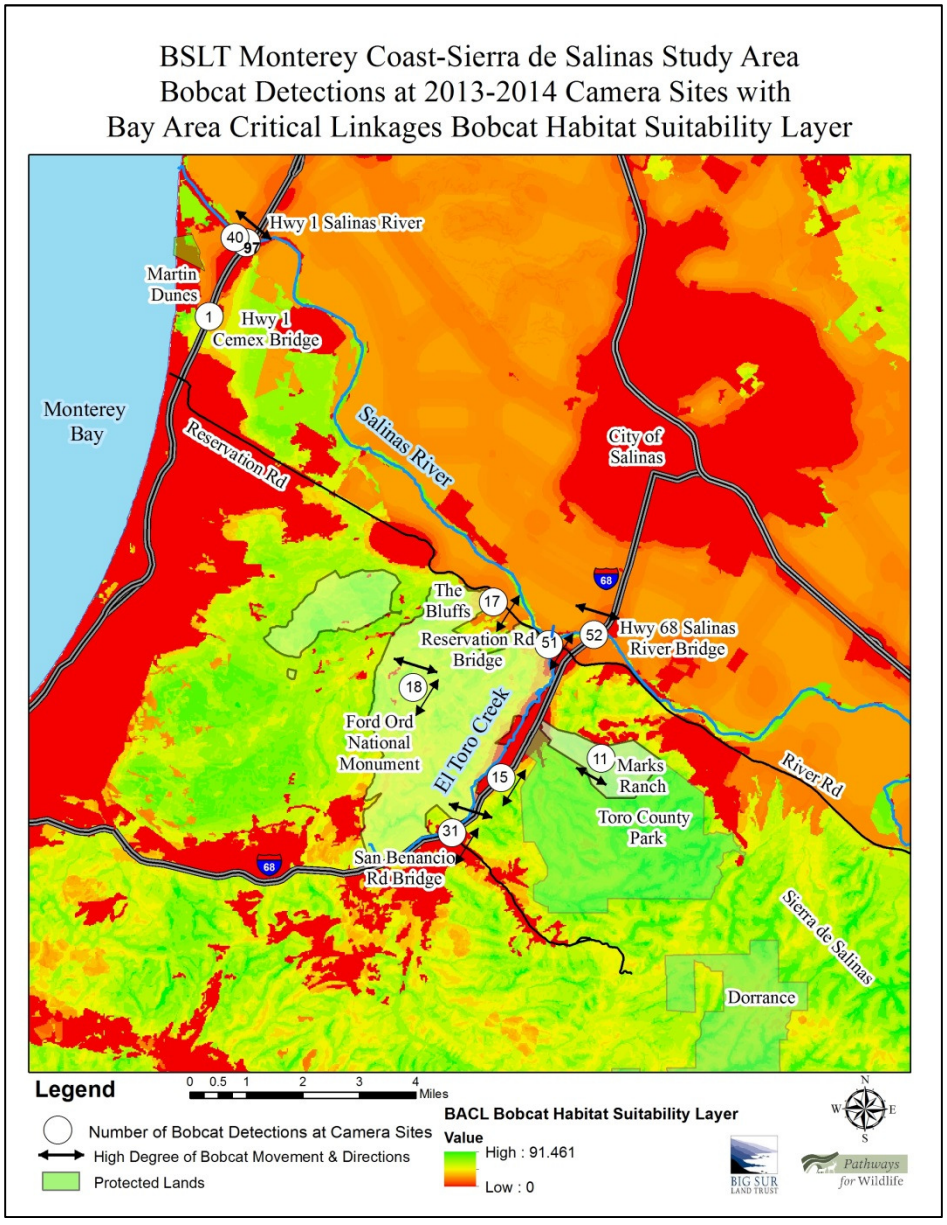

Figure 3: Bobcat Locations with BACL Habitat Suitability Layer for Monterey Coast-Sierra de Salinas.

Summary

San Benancio Road Bridge and El Toro Creek Reservation Road Bridge

These sites had the ***highest number of detections, 710 and 303***. The San Benancio station was set up for 8 months, while the El Toro Creek Reservation Road, was set up for only 6 and both cameras recorded more detections than at the other sites. This indicates that ***these two sites are critical areas for wildlife to safely move underneath the roads and that these animals are routinely using this habitat on a consistent basis.*** Further discussion on particular species use and juveniles traveling with their parents will be expanded upon in the species locations section.

Highway 1 Salinas River

Another interesting pattern is that at the **Highway 1 Salinas River,** there is a very similar number of detections at both camera sites on either side of the river, **171 on the north side** and **169 on the south side**. This is an important finding, in light of the wildlife exclusionary fencing issues, as the data indicates ***animals are still attempting to move along the river banks despite the wildlife exclusionary fencing that has been set up on the south banks.***

Highway 68 Salinas River

Along **the Salinas River at Highway 68**, in which there is a high amount of wildlife exclusionary fencing on either side of the river, a total of **160 detections** were recorded, indicating that the river banks are serving as important habitat for wildlife movement as the landscape is highly fragmented with fencing surrounding huge tracts of agricultural lands. ***There is a confluence with El Toro Creek and the Salinas River, in which animals can travel from the Salinas River, along El Toro Creek underneath Reservation Road to gain access to Fort Ord national Monument.*** The Fort Ord camera station also had a high amount of detections, 178 records of species, which will also further be expanded upon in the species locations section.