

# memorandum

date January 13, 2015

- to Karina Johnston Director of Watersheds Program Santa Monica Bay Foundation 1 LMU Drive, North Hall Los Angeles, CA 90045
- from Tommy Molioo Senior Associate Biologist Environmental Science Associates 626 Wilshire Boulevard, Suite 1100 Los Angeles, CA 90017
- subject Ballona Wetlands Ecological Reserve Fall 2014 Bat Survey Results

#### **Introduction**

This memorandum provides a summary of the bat surveys conducted at the Ballona Wetlands Ecological Reserve (Reserve) located in Marina del Rey, California. The bat surveys were conducted by ESA's bat specialist Tommy Molioo, to determine the bat species that currently occur on or adjacent to the Reserve during the 2014 fall and winter migration period. These survey results may also provide preliminary data on bat species that could potentially be year-round residents. Additional spring/summer surveys in 2015 would provide a full account of bat species that are both resident and migratory species on, and within the vicinity of, the Reserve.

#### **Bat Survey Locations**

Three survey locations were chosen within (or immediately adjacent to) the Reserve based on habitat suitability and the greatest opportunity to detect bat species that may be roosting or foraging within the Reserve.

- Survey Location #1 is located immediately adjacent to the Freshwater Marsh, and is characterized by a large freshwater pond with wetland vegetation that is located immediately adjacent to the Reserve. Bat species detected at Survey Location #1 may easily forage and occur within the Reserve, so it was determined that this location may provide the best opportunity to determine bat species that occur in the area.
- Survey Location #2 is located in the southern portion of the Reserve adjacent to a grove of Eucalyptus trees and a channel that is seasonally flooded by brackish water. Bats may roost and forage in this Eucalyptus grove and emerge to feed on insects over the Freshwater Marsh (Survey Location #1).

• Survey Location #3 is located in the western portion of the Reserve within the tidal channels of West Area B, and is dominated by pickleweed (*Salicornia pacifica*). Survey Location #3 provides opportunities for bats to night roost in the nearby riparian scrub habitat, and forage on insects over the tidal flats.

## **Methods**

The three survey locations were surveyed for resident and migratory bat species utilizing non-invasive acoustic monitoring that detect and record bat echolocation calls in flight. An ultrasonic SM3 bat detector was deployed for a total of six nights to determine if any bat species were present within the Reserve during the time of the survey. Each survey location was surveyed for two nights, which is adequate to determine the presence or absence of bats within the Reserve. Survey Location #1 was surveyed on November 17 and 18, 2014 from 1645 hours to 1945 hours. Survey Locations #2 and #3 were surveyed from December 8 through December 11, 2014 from 1645 hours to 1945 hours to 1945 hours. The detector was deployed by ESA's biologist on the first night of surveys and moved to subsequent survey locations by Ivan Mendel, a biologist with the Santa Monica Bay Foundation. The results of the surveys were analyzed offsite using SonoBat3 software with automated call classification and verified by ESA's biologist Tommy Molioo.

### **Results**

Based on the six nights of surveys, 98 total bat passes<sup>1</sup> were detected and recorded on or adjacent to the Reserve. This relatively high level of bat activity during the fall season suggests that resident bats occur on the Reserve. As shown in Table 1, four species were detected during the fall surveys, including silver-haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), and Mexican free-tailed bat (*Tadarida brasiliensis*). Mexican-free tailed bat and Yuma myotis are very common in southern California and often occur near fresh water sources, often roosting in structures typically observed in urban settings such as bridges and buildings. Hoary bat and silver-haired bat are tree roosting species that typically occur in woodland and forest areas in the vicinity of fresh water sources. Mexican free-tailed bat, Yuma myotis, and hoary bat are typically resident species in the region and silver-haired bat is the only migrant species detected. Additional spring/summer surveys in 2015 would verify which species are present year-round and which species are migrants.

Bat Species Detected*	Location 1 (Freshwater Marsh)	Location 2 (Eucalyptus Grove)	Location 3 (West Area B)
Mexican free-tailed bat Tadarida brasiliensis	79	3	1
hoary bat <i>Lasiurus cinereus</i>	7	2	0
silver-haired bat Lasionycteris noctivagans	3	0	0
Yuma myotis <i>Myotis yumanensis</i>	3	0	0

TABLE 1 BAT SURVEY RESULTS BY LOCATION

\*Due to the time of year surveys were conducted, bat activity and species diversity is lower than during the spring/summer months and the results may not represent all species that can occur on the Reserve.

<sup>&</sup>lt;sup>1</sup> Bat passes are recorded echolocation calls saved and analyzed as individual calls, but does not represent the number of individual bats detected. An individual bat can record several bat passes. The number of passes infers the level of bat activity in an area.

## **Conclusions**

Based on the results of the fall surveys, bats are considered present on and adjacent to the Reserve and any activities that would result in the disturbance or removal of roosting habitat in native and non-native trees, and riparian scrub habitat in areas such as the Freshwater Marsh, Eucalyptus Grove, and West Area B, will need to consider bat occupancy, particularly maternity roosts, prior to any habitat disturbance to avoid direct impacts to bats.

If you should have any questions regarding the information presented above, please feel free to contact me at tmolioo@esassoc.com or May Lau at <u>mlau@esassoc.com</u>, or via phone at 213-599-4300.

Sincerely,

Tommy Mistion

Tommy Molioo Senior Associate Biologist